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W. H. H.

Asiatic Horns ..  
— and Antlers

**INDIAN MUSEUM, CALCUTTA**



# Publications of the Indian Museum.

	Rs. As.		Rs. As.
Account of the Deep-sea Brachyura collected by the R. I. M. S. "Investigator." By A. Alcock, M.B., C.M.Z.S. ... ..	6 0	Catalogue of Moths of India, Parts I to VII. By E. C. Cotes and C. Swinhoe, F.L.S., F.Z.S., etc. ...	5 12
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Catalogue of Indian Crustacea. Part I.—Introduction and Brachyura Primigenia. By A. Alcock, M.B., LL.D., F.R.S. ... ..	7 0	Guide to the Zoological Collections exhibited in the Invertebrate Gallery of the Indian Museum. By A. Alcock, M.B., C.M.Z.S. ( <i>Out of print.</i> )	
Catalogue of the Indian Decapod Crustacea. Part II.—Anomura. Fasciculus I.—Pagurides. By A. Alcock, M.B., LL.D., F.R.S., C.I.E. ... ..	14 0	Guide to the Zoological Collection exhibited in the Reptile and Amphibia Gallery of the Indian Museum. By A. Alcock, M.B., C.M.Z.S. ( <i>Out of print.</i> )	
Catalogue of the Indian Decapod Crustacea. Part III.—Macrura. Fasciculus I.—The Prawns of the Peneus Group. By A. Alcock, M.B., LL.D., F.R.S., C.I.E. ... ..	7 0	Hand List of Mollusca in the Indian Museum, Parts I and II, and Fasciculus E. By G. Nevill, C.M.Z.S., etc. Index, Parts I and II. By W. Theobald ... ..	7 4
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		Monograph of the Oriental Cicadidæ, Parts I to VII. By W. L. Distant, F.E.S. ... ..	31 14

The above can be obtained from the Superintendent of the Indian Museum, Calcutta, and from Messrs. Friedlander & Sohn, 11, Carlstrasse, Berlin.

**Other Publications edited and sold by the Superintendent of the Indian Museum (also obtainable from Messrs. Friedlander & Sohn) issued by the Director of the Royal Indian Marine.**

Illustrations of the Zoology of the R. I. M. S. "Investigator," 1892. Fishes, Plates I to VII. Crustacea, Plates I to V, 1894. Fishes, Plates VII to XIII. Crustacea, Plates VI to VIII. Echinoderma, Plates I to III, 1895. Echinoderma, Plates IV and V. Fishes, Plates XIV to XVI. Crustacea, Plates IX to XV, 1896. Crustacea, Plates XVI to XXVII, 1897. Fishes, Plate XVII. Crustacea, Plates XXVIII to XXXII. Mollusca, Plates I to VI, 1898. Fishes, Plates XXVIII to XXIV. Crustacea, Plates XXXIII to XXXV. Mollusca, Plates VII and VIII, 1899. Fishes, Plates XXV and XXVI. Crustacea, Plates XXXVI to XLV, 1900. Fishes, Plates XXVII to XXXV. Crustacea, Plates XLVI to XLVIII. Index, Part I, 1901. Crustacea, Plates XLIX to LV. Mollusca, Plates IX to XIII, 1902. Crustacea, Plates LVI to LXVII. Crustacea, Plates LXVIII to LXXVI. Fishes, Plates XXXVI to XXXVIII, 1905. Crustacea (Malacostraca), Plates LXXVII to LXXIX. Crustacea (Entomostraca), Plates I and II. Mollusca, Plates XIV to XVIII, 1907.—*Rs. 1 per plate.*



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AN ILLUSTRATED CATALOGUE

OF THE

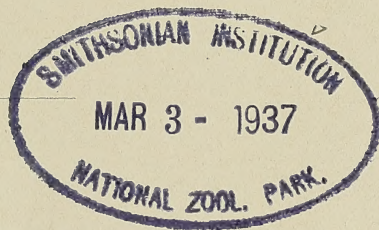
# ASIATIC HORNS AND ANTLERS

IN THE COLLECTION OF THE

INDIAN MUSEUM.

BY

T. BENTHAM.



CALCUTTA :

PUBLISHED BY ORDER OF THE TRUSTEES AND SOLD BY THE SUPERINTENDENT,  
INDIAN MUSEUM, NATURAL HISTORY SECTION.

1908.

PRICE TWO RUPEES.



CALCUTTA :

PRINTED BY THACKER, SPINK AND CO



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## PREFACE.

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My object in asking Mr. Bentham to prepare this catalogue of the horns and antlers in the collection of the Indian Museum and recommending its publication to the Trustees has been twofold. In the first place, a catalogue of the kind seemed likely to be of use to sportsmen, who frequently write to the Museum for information regarding horns and antlers, and in the second I thought that it might serve as an appeal to those in a position to help the Museum by giving us specimens. The greater part of our collection of Mammals consists of the gifts of naturalists and sportsmen of a bygone generation; it is now rare for us to obtain specimens of the Ungulates except by purchase from dealers. Assistance given us increases our power of assisting the amateur, and we are often placed in the somewhat ridiculous position of being unable to answer inquiries about some common animal, simply because we cannot refer to specimens so common that no one has taken the trouble to collect them. The exact distribution of many of the Indian species is still unknown, and can only be properly investigated by the examination of large numbers of examples from a large number of localities.

As this work is intended primarily for sportsmen and field naturalists, although I trust that it will not prove devoid of interest even to museum zoologists, measurements are given in inches and tenths of inches instead of centimetres and millimetres; but a table for converting the one into the other is given at the end of Mr. Bentham's introductory note. There are other "anachronisms," for which I must accept the responsibility and as regards which adverse criticism must be expected. No attempt has been made to bring the nomenclature of the Ungulates "up to date." In the babel of names that now rages round many of the common animals the safest course to take has seemed to me, in the circumstances, to adopt, without deviation therefrom, the nomenclature of some standard work readily accessible to naturalists. I have therefore recommended Mr. Bentham to follow that of the late Dr. W. T. Blanford's volume on the Mammals in the "Fauna of British India and Ceylon." No great difficulty has been experienced in bringing the nomenclature of extra-Indian Ungulates represented in the collection (to which Dr. Blanford himself contributed so large a share) into harmony with that of this invaluable work. I have also advised Mr. Bentham to ignore many of the "species," "sub-species" and "varieties" into which some of the common Mammals have recently been divided. Some of these



“species,” etc., are merely revivals from the classification of a less scientific age, many are founded on imperfect evidence and are due rather to a theory that animals must vary locally than to the examination of a sufficient number of specimens; even in the few cases in which a large number of examples of each species from a large number of localities have been examined, the student of human nature *plus* zoology may doubt whether it is beneficial to the study of the latter that minute differences should be recognized by the giving of new names to which their author can append his own in perpetuity. The term “blanket name” has recently been coined by those who believe in the system of multiplying species indefinitely, to mean names (such as *Mus rattus* and *Nemorhædus sumatraensis*), which they regard as representing not single species but groups of allied forms. The names used in this catalogue are in many cases “blanket names.”

With this qualification, the collection of horns and antlers in the Museum is nearly complete so far as the Fauna of the Indian Empire is concerned, while numerous heads of interesting species from other Oriental countries are also included. Of the species recognized by Blanford as Indian only Fea's Barking-deer (*Cervulus fea*) is not represented. It has, therefore, been possible to give photographs of the horns or antlers of all the Indian Cervidæ and Bovidæ but one. Care has been taken to choose well-developed horns of known *provenance* whenever possible. Such photographs may not be devoid of value even in the eyes of those who regard “blanket names” with contempt.

N. ANNANDALE,

*Superintendent, Indian Museum.*

CALCUTTA, )  
August 23rd, 1908.)

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## INTRODUCTION.

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IN 1890 Mr. Sclater, then Deputy Superintendent of the Indian Museum, wrote the second part of the Catalogue of Mammals contained in this institution. This volume contains an account of the Bovidæ and Cervidæ, with which the present work also is concerned. It does not, however, go into the measurements of the skulls and horns of these two groups. I have therefore been asked by the Superintendent, Dr. N. Annandale, to prepare a catalogue giving measurements of the fine collection of horns of Asiatic Ungulates exhibited on the walls of the Mammal gallery, so that the book might be of use to sportsmen and others. This has accordingly been done, some 450 specimens having been measured.

Most of the species are found within Indian limits. All are found within the Oriental Region with the exception of two or three species from Palæarctic Asia, from which continent all the specimens here described have been obtained. The European, American and African collection is too small and incomplete for special notice.

The collection contains two types, both of species which, unfortunately, do not occur in Indian limits. There are several records, notably a specimen of *Budorcas taxicolor* from the Mishmi Hills and a specimen of *Nemorhædus sumatraensis* presented by Col. Phayre. There are two records of *Bos frontalis*, but it is difficult to know whether these are pure bred or hybrids, since there is very little history attached to them, besides which it has long been disputed as to whether *Bos frontalis* occurs wild in Indian limits. Several authors take it that this species is identical with *Bos gaurus*.

The specific identity of *Ovis cycloceros* and *Ovis vignei* has now been more or less fully established and they are therefore included under one species, viz., *Ovis vignei*.

T. BENTHAM.



NOTICE CONCERNING MEASUREMENTS, etc.

Length is in inches.

The length of horns is in all cases measured along the outside curve, in deer above the burr.

Circumference is measured at base of horn, in deer above the first tine.

All horns with a core have a tendency to shrink when kept for some years.

NOTE.—The numbers on the plates refer to the serial numbers in the tables.

TABLE FOR CONVERTING INCHES INTO CENTIMETRES

Inches.	Centimetres.	Inches.	Centimetres.	Inches.	Centimetres.
·06	·15	2·5	6·25	7·5	18·75
·125	·3	3	7·5	8	20
·25	·6	3·5	8·75	8·5	21·25
·5	1·25	4	10	9	22·5
·625	2·1	4·5	11·25	9·5	23·75
·66	1·66	5	12·5	10	25
·875	2·2	5·5	13·75	10·5	26·25
1	2·5	6	15	11	27·5
1·5	3·75	6·5	16·25	11·5	28·77
2	5	7	17·5	12	30



*ERRATUM.*

PAGE 35, below plate. *For “ $\frac{1}{4}$ th scale” read “ $\frac{1}{11}$ th scale.”*

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# **BOS GAURUS, Hamilton Smith.**

(THE GAOUR OR "BISON.")

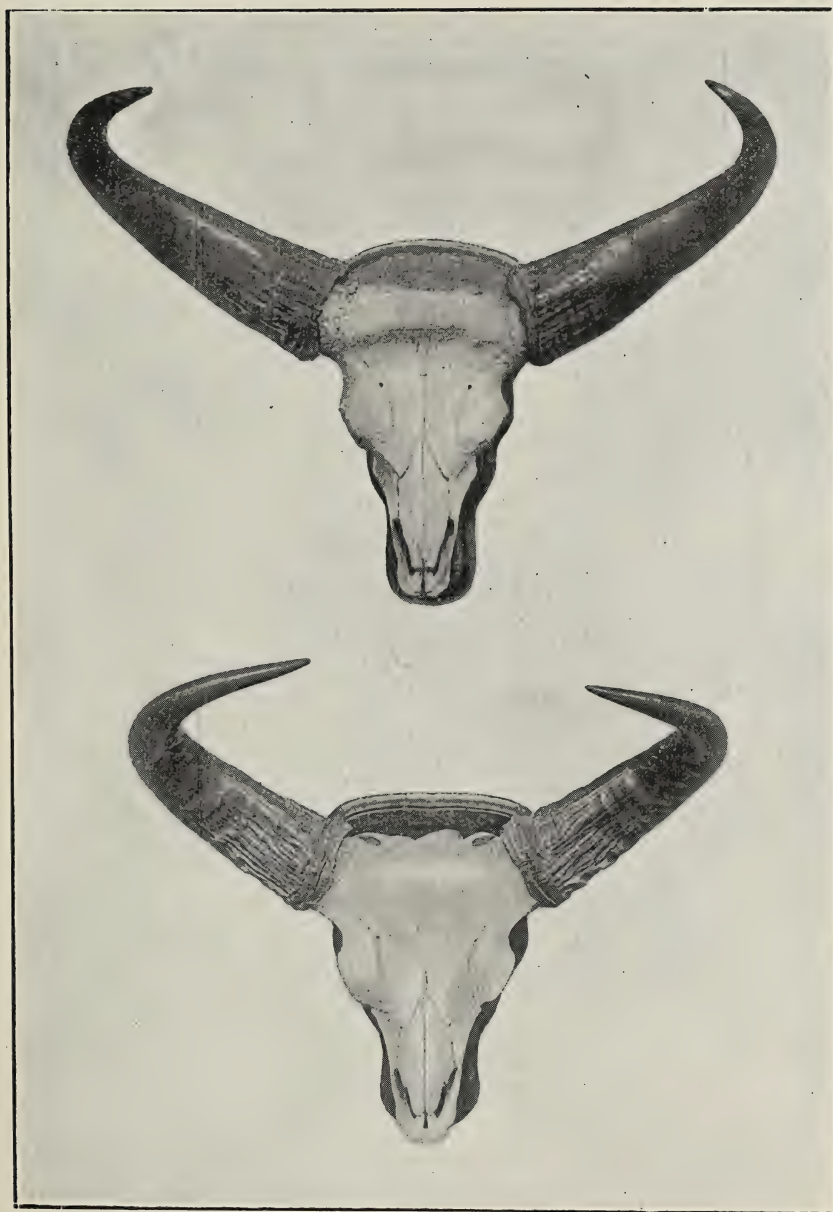
No.	Sex.	Locality.	Donor.	Date.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference at base.	Tip to tip.
1	♂	?	W. T. Blanford	1868	19	8.5	20	10.5	4.7
2	♀	Assam	Col. Jenkins	1844	19.5	9	19	12.4	12.7
3	♀	?	.....	?	19.5	8.3	15.5	10.8	9
4	♂	Chaibassa	Maj. Tickell	1842	20	9	25.8	15.3	27
5	♂	Gauhati, Assam	Maj. Pollock	1870	21.9	10.3	19.4	11.2	13.8
6	♂	Malacca	Dr. Maingay	1863	?	?	23.4	17	20.6
7	♂	Burma	Col. Phayre	1861	?	?	32	18	22
8	♂	Gauhati, Assam	Maj. Pollock	1870	19.05	8	20.5	13	20.25
9	♂	?	Col. Guthrie	1862	19.75	10	?	?	?
10	♀	Assam Hills	Col. Jenkins	1848	20.5	11.75	?	?	?
11	♂	Chittagong	J. A. Campbell	1879	?	?	19.75	12	5.5
12	♂	Ditto	Ditto	1879	19.75	10	31.5	19	15.75
13	♂	Ditto	Ditto	1879	?	...	21	14	21.5
14	♂	?	Purchased	1847	19.5	10.5	29.25	16.5	20.75
15	♂	Chittagong Hill Tracts	J. T. Jarbo	1881	?	?	22.75	12.75	6.75

*Distribution*.—The peninsula of India, in forest tracts, from the Vindhyan Hills along the north of the Nerbudda (*Jerdon*); southward through Kandeish and the Western Ghats to Tinnevely (*Elliot*); eastward through the Central Provinces and Chota Nagpore almost to Midnapore (*Jerdon*); the Nepal Terai (*Hodgson*); Assam; Tipperah and Chittagong Hills; southwards through Burma (*Blyth*); to Malay Peninsula (*Cantor* and *Maingay*), but not recorded from any of the islands; Ceylon.

*Record Head*.—Length 46 in. Circumference 20.5 in. Tip to tip 33 in. From Malay States. (*Cf.* Lydekker, *Game Animals of India*, etc., p. 56.)

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 484.





4

12

*Bos gaurus*,  $\frac{1}{10}$ th scale.



# **BOS FRONTALIS, Lambert.**

(THE GAYAL OR MITHAN.)

No.	Sex.	Locality.	Donor.	Date.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference at base.	Tip to tip.
1	♂	Chittagong Hill Tracts	J. T. Jarbo	1879	20.5	10	22	14.75	24
2	♂	Chittagong	R. W. Frith	1850	17.75	9.5	15	14.75	13.5
3	♂	Ditto	Ditto	"	18.5	8	10.75	13.5	28
4	♂	Ditto	Ditto	"	17.5	8.75	...	...	...
5	♂	Ditto	Ditto	1850	19.25	9	...	...	...
6	♂	...	...	...	...	...	14.5	13.5	13.75
7	♂	...	...	...	...	...	18.5	13.75	32
8	♂ Juv.	...	Calcutta Zool. Gardens, E. Blyth.	1857	20.25	8.25	17.25	15.75	38.25
9	...	...	Calcutta Zool. Gardens.	1893	...	...	18.25*	17	" Hybrid."
									" Pure bred."

*Distribution*:—Akyab northwards through Arakan and the Chittagong Hills; through Tipperah and Manipur to the Naga Hills; Daffla Hills.

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 487.

\* Record.





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*Bos frontalis*,  $\frac{1}{10}$ th scale.



# **BOS SONDAICUS, Schlegel.**

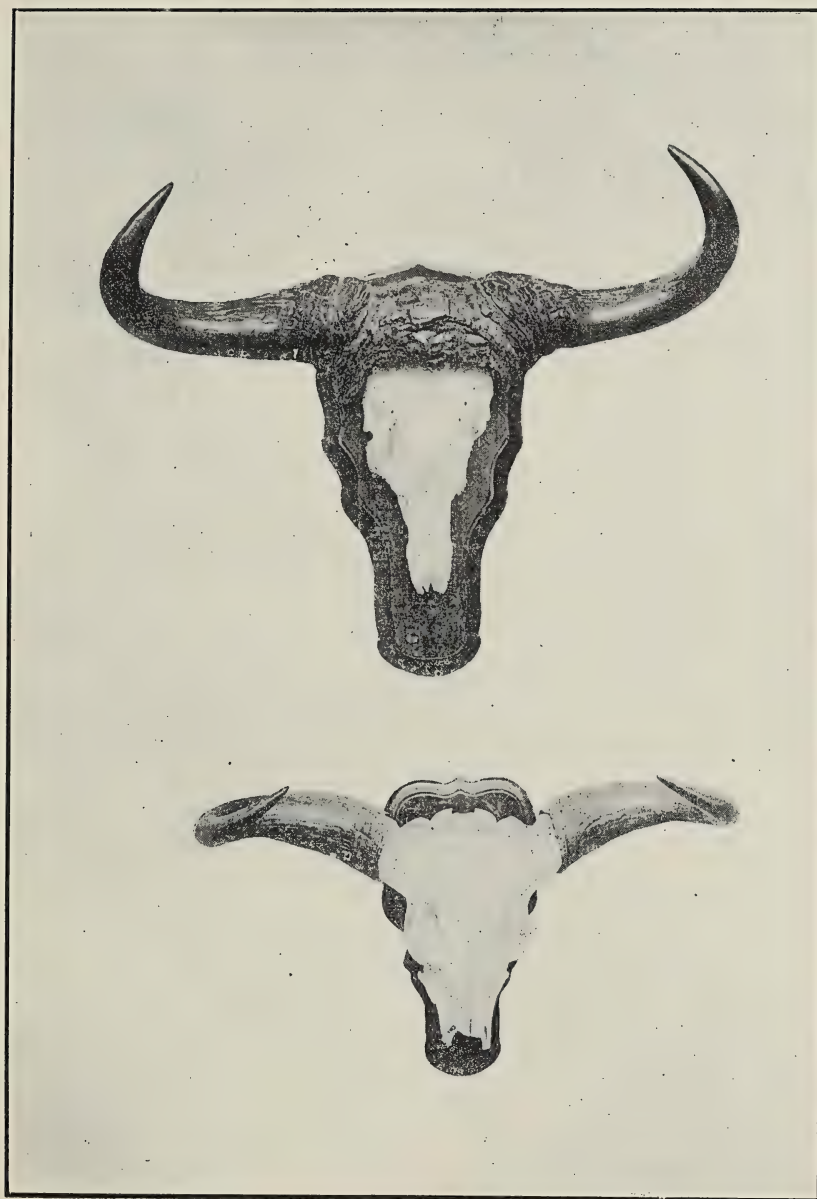
(THE BANTING.)

No.	Sex.	Locality.	Donor.	Date.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip
1	♂	Burma	Prince of the Netherlands.	1837	?	?	23.5	16	15.5
2	♂	Java	The Batavian Society.	1844	?	?	31*	21.5	30
3	♂	Upper Pegu	Col. Phayre	1849	18.75	8	21.5	12.5	19.5
4	♂	Burma	Zool. Gardens	1885	17	6.25	7	6.75	14.75
5	♂	Upper Pegu	Col. Phayre	1850	?	8.5	36.5	12	22.75 "Hybrid"

*Distribution*.:—Arakan through Burma and the Malay Peninsula ; Java, Bali, and Borneo.  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 489.

\* Record





2

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*Bos sondaicus*,  $\frac{1}{12}$ th scale.



## BOS GRUNNIENS, Linnæus.

(THE YAK.)

No.	Sex.	Locality.	Donor.	Date.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	...	"Almora District"	Purchased	1892	19.65	8.75	24.3	11.75	11.5
2	...	Tibet	Lt.-Col. J. Fraser	1892	22.8	11.5	31.5	15	17.3
3	...	Chang Chenmo	W. Rutledge	1894	21.5	11	33.4	16	21.25
4	...	.....	.....	1862	?	?	26.75	11.8	18.75
5	...	Rondur, Tibet	Purchased (Row- land Ward).	1905	?	?	30.5	15.75	25.25
6	...	Bhutan	Capt. E. Smyth	1897	21.75	10.5	30.5	14.5	17.3

*Distribution* :—The hill ranges of Central Asia, never below 6,000 feet.

*Record Head* :—Length 39 in. Lucknow Museum (*cf.* Lydekker, *Game Animals of India*, etc., p. 79).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 490.





*Bos grunniens*,  $\frac{1}{11}$ th scale.



# **BOS BUBALUS, Linnæus.**

(THE INDIAN BUFFALO.)

No.	Sex.	Locality.	Donor.	Date.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Kaliabar, Assam	J. Hamilton	1879	22.5	9	48.3	16.75	33.5
2	♂	Assam	Dr. Wallich	1816	24	9	49	16	48.75
3	♂	Ditto	Maj. Brodie	1848	24.5	9	42.5	18.5	40
4	♂	Ditto	Ditto	1848	21.5	8.5	35.8	16.5	25.75
5	♂	?	Ditto	1848	23	7.5	43	15.6	17
6	♂	.....	?	?	24.5	9	31	18.5	27.4
7	♂	.....	?	?	21.75	6.75	25.8	12.5	17.25
8	♂	Dibrugarh, Assam	Sir J. Barlow	1856	23.3	7.25	41.3	18.6	23.5
9	♂	.....	.....	...	...	...	40.25	19.5	46.15
10	♂	Sadiya, Assam	Col. Graham	1877	22.25	8.5	40.25	17.75	19.5
11	♀	Assam	Dr. Mouat	1859	21.75	7.75	52.4	13.5	23.5
12	♀	Ditto	Dr. Wallich	1860	24.8	7.5	46.6	12.75	72
13	♀	Ditto	Ditto	1860	22.5	7.25	52.75	12.5	30
14	♀	Ditto	Ditto	1860	23.8	8.5	47.75	13.4	45.5
15	♂	Ditto	Ditto	1860	24	9.25	53.75	18.25	40.5

*Distribution*:—Southward from the Ganges to the Godavery; westward to Mundla; the Nepal Terai; Purneah; the Sunderbunds and the valley of the Brahmaputra.

*Record Head*:—One horn, length  $77\frac{3}{8}$  in. British Museum (*cf.* Rowland Ward, *Horn Measurements*, p. 223).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 491.





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*Bos bubalus*,  $\frac{1}{18}$ th scale.



# OVIS HODGSONI, Blyth.

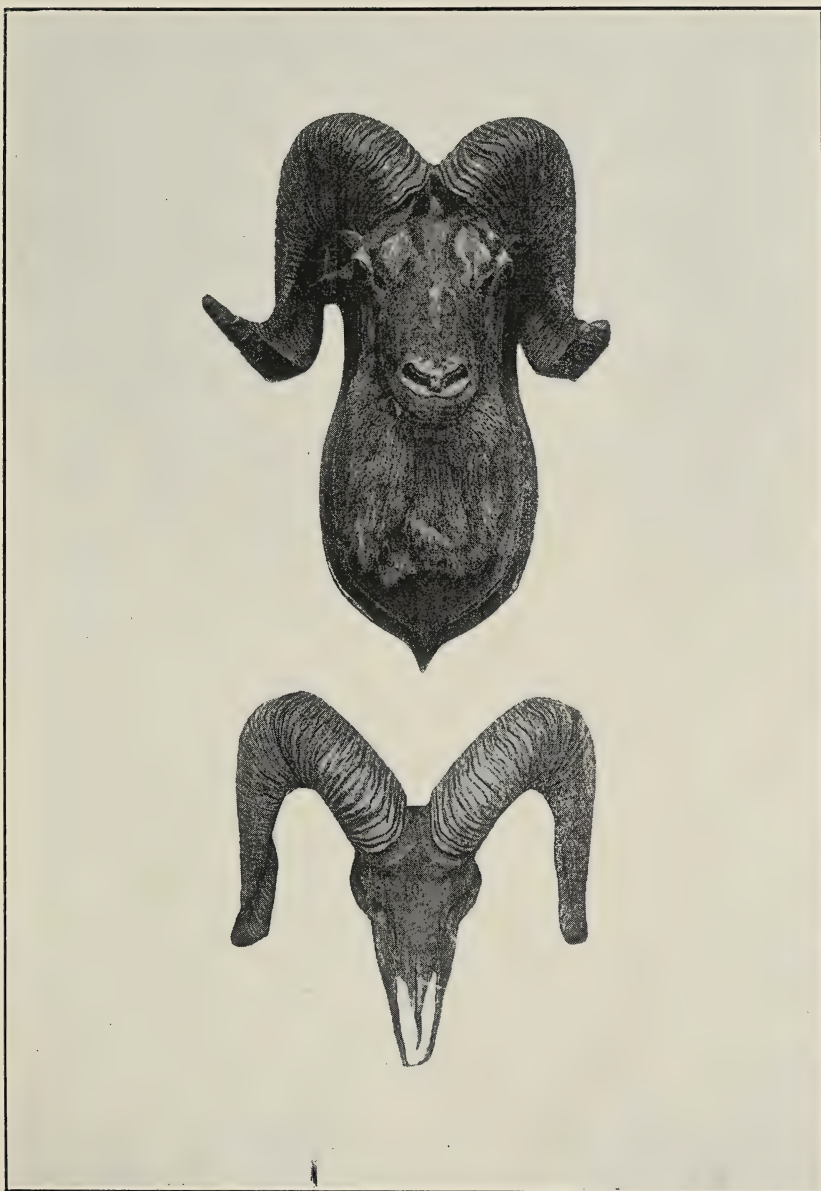
(GREAT TIBETAN SHEEP OR "OVIS AMMON.")

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	"Cachar"	G. T. Lushington	1862	10·8	6·25	41	16	17·5
2	♂	Ditto	Ditto	1862	?	?	42	16	18·75
3	♂	Ditto	Ditto	1862	?	?	33·25	16·75	21·25
4	♂	Nepal region	Capt. Mitchell	?	13	7	33·5	17	15
5	♂	Tibet	Capt. Smyth	1862	13	6·25	31·75	16	16·5
6	♂	"Cachar"	T. Lushington	1862	...	...	41	17·25	21·5
7	♂	Ditto	Ditto	1862	14·25	6	24·25	13·25	20·5
8	♂	?	?	?	13·5	6·25	28·75	17·5	20·75
9	♂	?	Purchased	1897	14	6·5	38	16	21
10	♂	?	Ditto	1897	14	6·8	43·5	16	20
11	♂	Chang Chenmo, Ladak	S J. Stone	1888	?	?	36·75	16	20·25

*Distribution*:—North of the snowy range of Himalayas; Ladak to the country north of Sikkim, altitude 12,000 to 15,000 ft.; E. Siberia.

*Record Head*:—Length 57 in. Circumference 18 $\frac{3}{4}$  in. Tip to tip 29 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 97).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 494.



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*Ovis hodgsoni*,  $\frac{1}{10}$ th scale.



# OVIS POLI, Blyth.

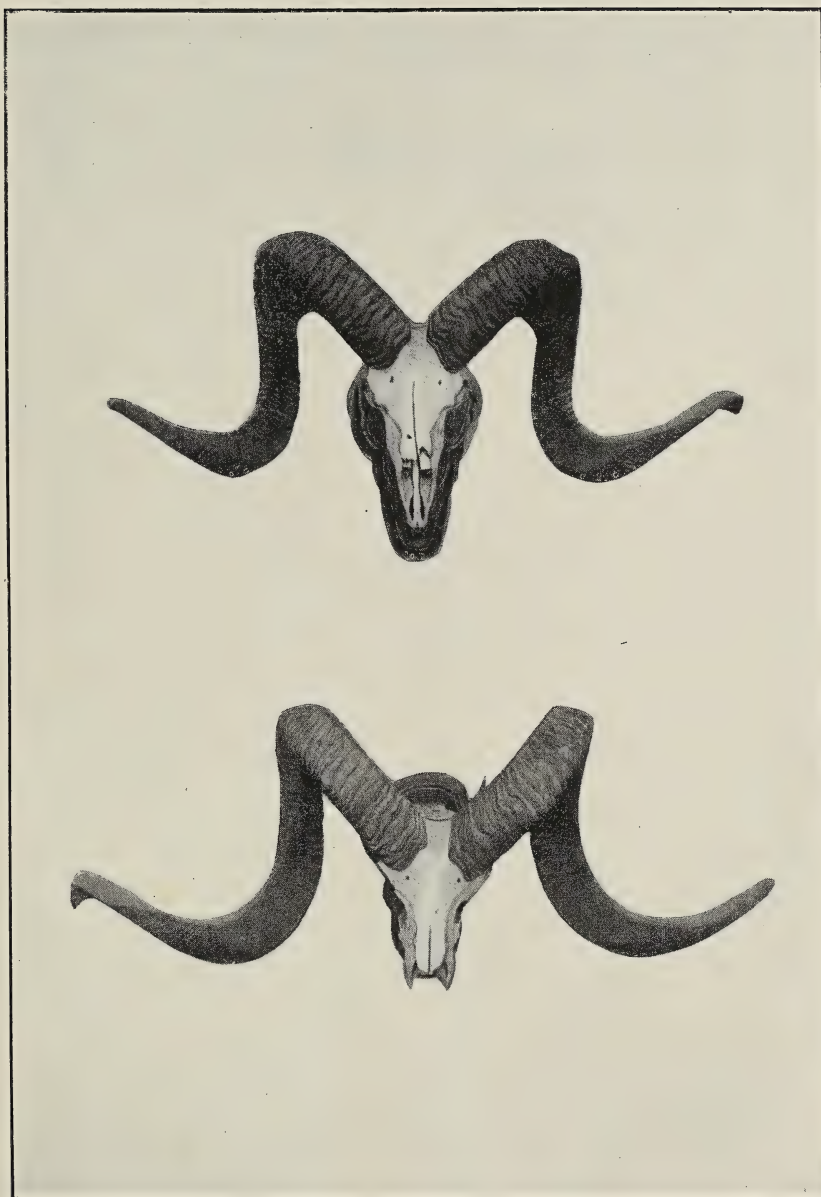
(MARCO POLO'S SHEEP.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Near Kashgar	Dr. F. Stoliczka ...	1877	?	5	18.75	10.75	18.5
2	♂	Ditto	Ditto	1877	10.75	5.7	23.5	11	22.8
3	♂	British Baluchistan...	E. J. Jones	...	13.25	6.25	42.5	12.75	32
4	♂	Tagdanbash Pamir ...	W. A. Lockhart...	1886	15	6	56	15	44
5	♂	Hunza	Col. Biddulph ..	1879	...	6	68	16	52.5
6	♀	Thian Shan Mts.	Dr. F. Stoliczka ...	1874	...	...	12.25	5.75	15.25
7	...	Little Pamir	Lieut. Ossetinsky	1896	?	?	51.5	15.5	47.25
8	♂	Ditto	Ditto	1896	?	?	22	10	21.75
9	♀	Ditto	Ditto	1896	?	?	9.75	4.5	14.25
10	♀	Ditto	Capt. E. F. McSwiney.	1896	?	?	13.5	6.25	14.75
11	♂	Near Kashgar	Dr. F. Stoliczka ...	1877	?	?	32	12	34
12	♂	Ditto	Ditto	1877	?	?	33	12.5	31

*Distribution*.—The Pamir; Thian Shan Range; round Lake Issya; Eastern Turkestan to the Altai; Shim Shal Pamir; Hunza, N. Gilgit.

*Record Head*.—Length 75 in. Circumference 16 in. Tip to tip 54½ in. (cf. Rowland Ward, *Horn Measurements*, p. 194).

Cf. Blanford, *Fauna of British India*, Mammalia, p. 496.



*Ovis poli*,  $\frac{1}{18}$ th scale.



**OVIS VIGNEI, Blyth.**  
(URIAL OR SHAPOO.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Nepal	Capt. J. Manners-Smith.	?	?	?	24.5	11	16.5
2	♂ Juv.	Shiraz	?	?	?	?	12	6.75	8.5
3	♂	Khawja, Afghanistan	Genl. Lumsden	1884	?	?	17.75	10	20
4	♂	?	?	?	11	4	24	10.25	19.5
5	♂	?	?	?	8.5	4	15	8.5	18.25
6	♂	?	?	?	10	4.5	19.75	10.4	16.3
7	♂	?	?	?	?	?	11	7.5	15.75
8	♂	Shamiran Mts.	W. T. Blanford	1844	9.5	3.5	20.5	9	16.5
9	♂	Kashmir	H. Duvergne	1891	10.5	4.25	31	11.5	17.75
10	♂	?	?	?	9	3.75	21.75	8.5	12
11	♂	?	?	?	9.5	4.25	25.25	9.5	15
12	♂	British Baluchistan...	E. Jones	1853	9.25	4.5	30.5	15.25	15
13	♀	Punjab Salt Range...	W. Theobald	1853	9	4	27.5	10.75	12.75
14	♀	Ditto	Ditto	1853	8	3.75	5.5	3.75	4
15	♂	Punjab	W. T. Blanford	1844	8	4	26	9.75	13.5
16	♂	Afghanistan	Purchased	1871	8.75	3.5	4.25	3.75	4.5
17	♂	Jalk, Baluchistan	W. T. Blanford	1877	?	?	27	8.5	13
18	♂	Dizak, do.	Ditto	1872	8.5	3.25	16.25	8	20.75
19	♂	Khawja, Afghanistan	J. E. T. Aitchison	1886	10	4	21.75	10.75	19
20	♂ Juv.	British Baluchistan...	E. J. Jones	1889	9	3.9	2.25	3.6	3.5

*Distribution*:—Punjab Salt Range; Suleiman Range; Afghanistan and Baluchistan; Nepal; Ladak and Western Tibet at high elevations; Persia.

*Record Head*:—Length 39.5 in. Circumference 11 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 104).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 497.



12

9

17

*Ovis vignei*,  $\frac{1}{10}$ th scale.



# OVIS NAHURA, Gray.

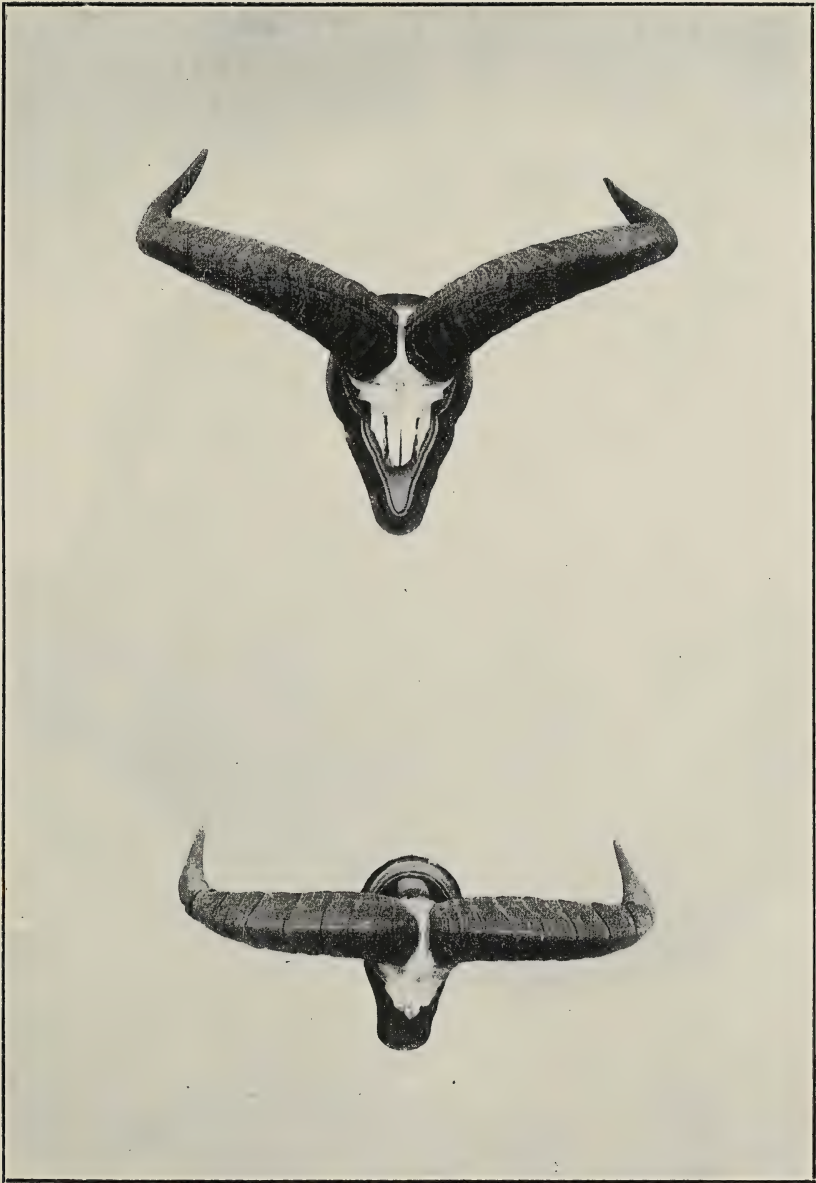
(THE BHARAL.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Himalayas	Capt. Smyth	1860	?	?	23	10.75	16
2	♂	?	Ditto	1860	10.5		24.5	10.75	...
3	♂	?	Ditto	1860	?	...	15	8.75	19
4	♂	Near Tam Sanju Valley of Kuen-lun Mts.	Dr. F. Stoliczka	1874	8	4.5	28.25	10.5	20
5	♂	Himalayas	Capt. Smyth	1860	10	3.25	19	10.75	25
6	♂	?	?	?	?	?	18	9.5	23
7	♂	?	?	?	?	?	8.5	5	13.5
8	♂	?	Purchased	?	?	...	6.75	3.5	10.25
9	♂	Himalayas	?	?	?	5	32	12.5	25.25
10	♂ Juv.	?	?	?	?	3.75	4.25	4.25	4.5
11	♂	Sang-Jokh-la Pass, Tibet.	S. J. Stone	1888	?	4	22.75	10.2	27
12	♂	N. of Nilang, Garhwal	Ditto	1888	?	4.5	23	11.5	27

*Distribution*.—The whole of the Himalayas, from Ladak to Sikkim; the Kuen-lun Range and the Altyn Tagh; Moupin, E. Tibet.

*Record Head*.—Length 32.5 in. (cf. Lydekker, *Game Animals of India*, etc., p. 160).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 499.



9

2

*Ovis nahuva*,  $\frac{51}{16}$ th scale.



## CAPRA ÆGAGRUS, Gmelin.

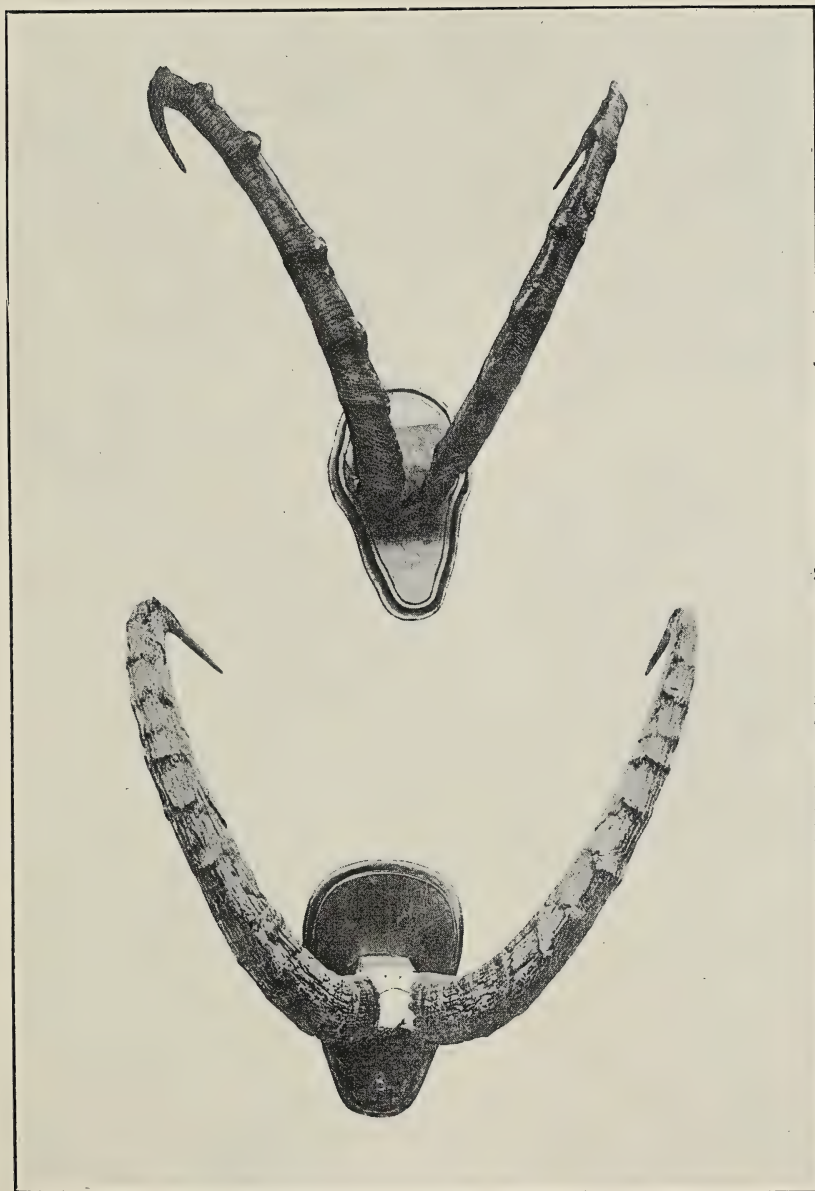
(THE PERSIAN IBEX.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	Ispahan, Persia	Shaik Harri	1875	?	?	11.5	4.75	6
2	♂	Sind	W. T. Blanford	1875	?	?	13	4	7.5
3	♂	Ispahan, Persia	Sir O. B. St. John.	1886	9.5	4.25	35.25	7.75	9
4	♂	Sind	Karachi Mus.	1879	10	4	39.75	7.25	3
5	♂	Afghanistan	Sir A. Burnes	1844	...	3.75	31.75	7.5	14.75
6	♂	Sind	Karachi Mus.	1879	...	...	37	8.25	12.25
7	♂	.....	...	...	9.75	3.5	31.25	6.5	11.5
8	♂	Near Shiraz	Sir O. B. St. John	1886	?	?	43.3	9	24.25
9	Juv.	Sind	A. E. Watson, Esq.	1876	?	?	14.25	3.5	5.5
10	♂	Ditto	Ditto	1876	?	?	34.5	8.5	21.5
11	♂	Shiraz	Persian Collection	1876	?	?	40	9	22

*Distribution*:—Persia, Afghanistan and Baluchistan; the Pubb and Suleiman Ranges; Asia Minor and the Caucasus; the Greek Archipelago.

*Record Head*:—Length 53 in. Circumference 7.6 in. Tip to tip 8.75 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 112, and Rowland Ward, *Horn Measurements*, p. 148).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 502.



11

8

*Capra aegagrus*,  $\frac{1}{2}$ th scale.



## CAPRA SIBIRICA, Mayer.

(KASHMIR AND TIBET IBEX.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circum- ference.	Tip to tip.
1	♂	?	Purchased	1871	9.75	4	19	9.3	10.25
2	♂	?	Ditto	1871	8.75	4.5	21.75	9.25	10.5
3	♂	Thian Shan Mts.	Dr. F. Stoliczka...	1874	10.25	5.25	34.75	9.5	9.25
4	♂	.....	Purchased	1871	11.25	5	30.5	8.75	14.5
5	♂	Thian Shan Mts.	Dr. F. Stoliczka...	1874	13.5	5.4	31.75	9.5	13.25
6	♂	Near Kashgar	Ditto	1874	?	?	33.25	10.25	11
7	♂	Bunji Gilgit	S. J. Stone	?	?	?	38.25	10.75	21.25
8	♂	Near Kashgar	Dr. F. Stoliczka...	1874	?	?	46.5	11.75	19.25
9	♂	Kalsi, Ladak	N. Elias	1879	?	?	37.75	10.25	13.25
10	♂	No history	?	?	?	?	30	10	13.5

*Distribution*:—The Himalayas from the Gilgit district (Scully), eastward to Nepal, but not east of Nepal; also the higher ranges of Tibet (Hodgson), the Thian Shan (Severtzoff) and the Altai and Sajon Ranges, but not extending east of Ladak (Radda).

*Record Head*:—Length 57.4 in. (cf. Lydekker, *Game Animals of India*, etc., p. 120).

Cf. Blanford, *Fauna of British India*, Mammalia, p. 503.



6

7

*Capra sibirica*,  $\frac{1}{3}$ th scale.

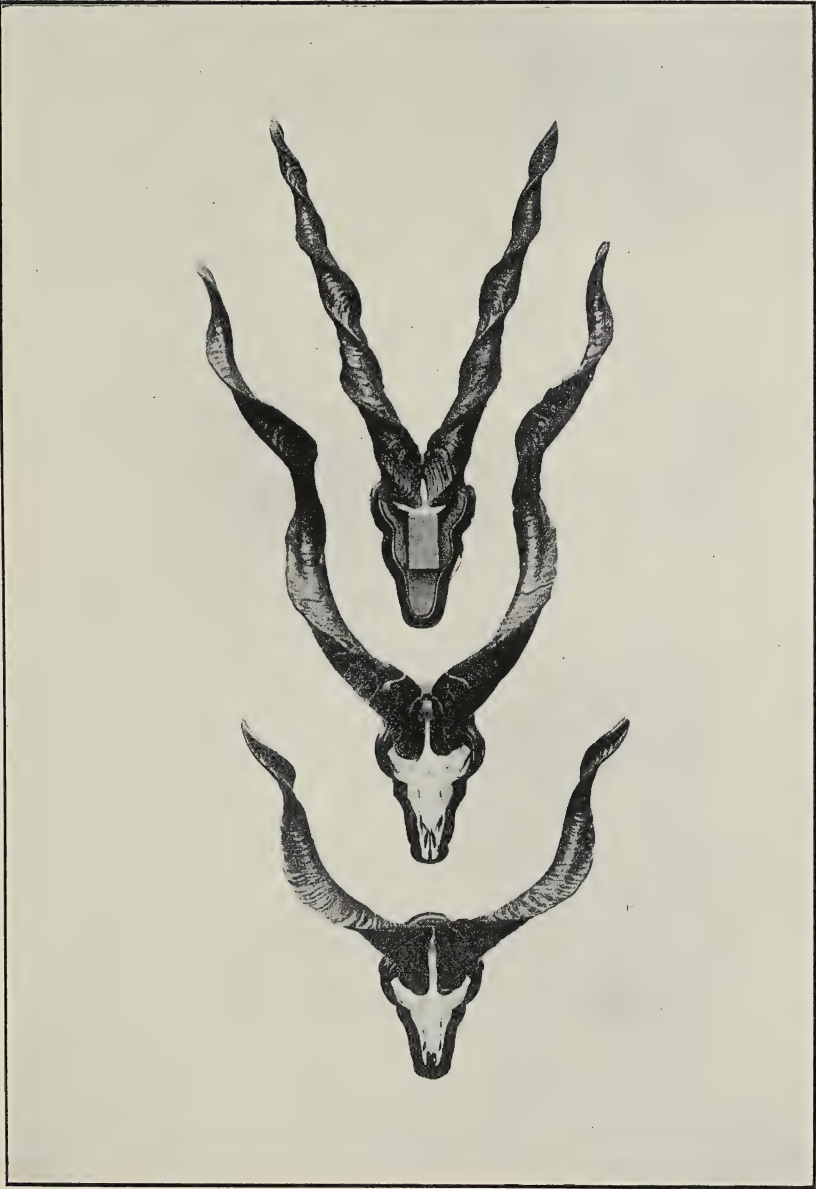


# CAPRA FALCONERI, Hügel.

(THE MARKHOR.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Gilgit	W. T. Blanford	1879	10	3.75	20.5	9.5	13.75
2	♂	Kashmir	W. Theobald	1878	?	?	23.75	9.5	15.25
3	♂	Baluchistan	W. D. Oldham	1891	?	?	32.4	11.25	15.5
4	♂	Bunji Gilgit	S. J. Stone	1884	12.25	5.25	44.25	10.75	25.5
5	♂	Ditto	Ditto	1884	11.75	4.75	32.75	10.5	25
6	♂	Gilgit	W. T. Blanford	1879	10.75	5	26.25	9	21.5
7	♂	Bunji Gilgit	S. J. Stone	1884	9.75	5.25	30.25	10.5	25.5
8	♂	Gilgit	Dr. Scully	...	?	?	44	11.75	34
9	♂	Ditto	Capt. J. Manners-Smith.	1900	?	?	45	10.75	37.75
10	...	Ditto	Sir A. Burnes	1840	11.5	4.75	33.5	10.25	One horn
11	♂ Juv.	Ditto	Capt. J. Manners-Smith.	1901	7.5	3	5	3.4	3.6

*Distribution*:—Afghanistan and the Tibetan Himalayas; the Pir Panjal in Kashmir; the Himalayas from Gilgit to the Beas River; the Suleiman Range; Ladak.  
*Record Head*:—Length 63 in. (cf. Lydekker, *Game Animals of India*, etc., p. 126).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 505.



3

4

5

*Capra falconeri*,  $\frac{1}{16}$ th scale.



## HEMITRAGUS JEMLAICUS, Smith.

(JHARAL OR TEHR.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	Nepal ...	?	?	?	?	7.75	7.75	6.25
2	♂	Near Mussoorie	Miss Millman	1873	11.25	4.25	12.75	8.75	5
3	♂	?	Capt. Smyth	1862	8.5	4.5	9.75	5.75	8.5
4	♂	Pir Panjal, S. Slope...	N. Elias	1879	?	?	9.5	8.5	4.75
5	♂	Himalayas	Dr. T. C. Jerdon...	1888	10	4.75	12	7.5	6.75
6	♂	Ditto	B. H. Hodgson	1844	10.75	4.5	10.5	8.5	8
7	♂	Ditto	Ditto	1844	?	?	13	9	9
8	♂	Ditto	Ditto	1844	?	?	10.5	8.3	6.6

*Distribution*:—The whole of the Himalayas from 6,000 ft. upwards.

*Record Head*:—Length 15.5 in. Circumference 8.25 in. (cf. Lydekker, *Game Animals of India*, etc., p. 135).

Cf. Blanford, *Fauna of British India*, Mammalia, p. 509.



5

7

*Hemitragus jemlaicus*,  $\frac{1}{4}$ th scale.



## HEMITRAGUS HYLOCRIUS, Blyth.

(THE NILGIRI WILD GOAT.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♀	Nilgiri Hills	Madras Museum...	1879	8.5	3.75	8.25	5.75	3
2	♀	S. Malabar	Dr. T. C. Jerdon...	...	9	3.75	9.75	7.25	4.25
3	♀	Nilgiri Hills	L. C. Stewart ...	...	10	3.25	8.75	6	3.25
4	♂	Travancore	Rev. J. Baker ...	...	9.75	4	15.75	8.75	6.75
5	♂	Deviculam, Travancore.	A. W. Turner ...	1889	9.5	4.25	14	8.25	4.5
6	♂	Nilgiri Hills	Madras Museum...	1879	10	4	13.8	8.5	5.75

*Distribution*.:—The Nilgiris and Western Ghats of Cochin and Travancore.

*Record Head*.:—Length 17.5 in. Circumference 9.85 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 138).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 511.



5, p. 34.



2, p. 34



1, p. 32.

*Hemitragus hylocrius*, and *H. jemlaicus*,  $\frac{1}{4}$ th scale.



## NEMORHÆDUS BUBALINA, Hodgson.

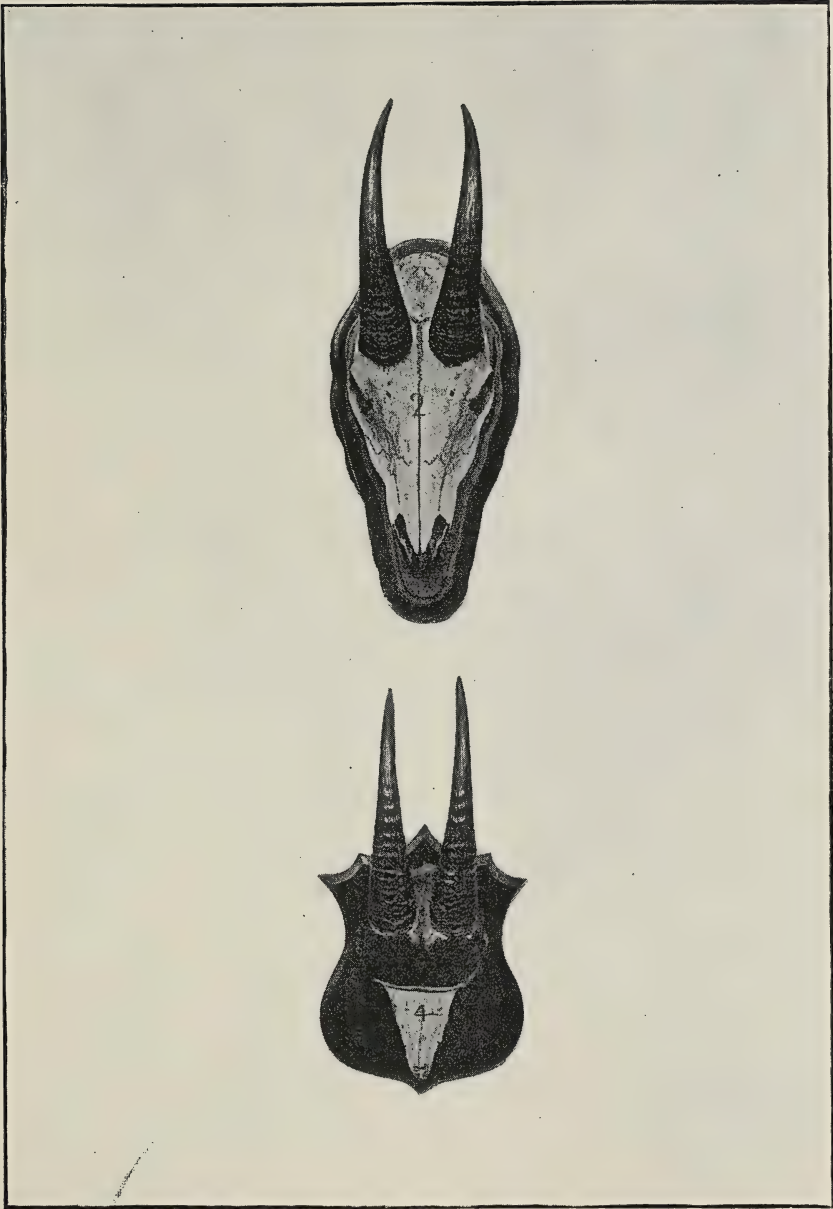
(THE SEROW.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	Sikhim	L. Mandelli	1877	11	3.7	7.6	5	4.5
2	♂	Sanda Valley, Yunnan	Yunnan Collection	1868	11.3	4	8.8	5.5	2.25
3	♂	Ditto	J. Anderson	1868	7.75	4.3	7.5	5	2.8
4	♂	Ditto	Ditto	1868	?	?	7.6	5	4.5
5	♂	Ditto	Ditto	1868	...	...	9.5	5	2.5
6	♂	Sikhim	L. Mandelli	1877	11.25	3.5	7.75	4.5	2.25

*Distribution* :—The Himalayas from Kashmir to the Mishmi Hills ; obtained by Anderson in Yunnan.

*Record Head* :—Length 13.5 in. Circumference 8.75 in.

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 514, and Pocock, *P. Z. S.*, 1908, p. 173.



2

4

*Nemorhadus bubalina*,  $\frac{1}{2}$ th scale.



## NEMORHÆDUS GORAL, Hodgson.

(THE GORAL.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	Sikhim ...	B. H. Hodgson ...	1862	8.5	3	7	3.5	4
2	♂ Juv.	Ditto ...	?	?	?	?	4.75	2	1.75
3	♂	Ditto ...	B. H. Hodgson ...	1862	8.75	3.25	5.75	3.5	3
4	♀	Ditto ...	Ditto	1862	?	?	6.25	3.5	2.75
5	♂ Juv.	Kashmir	W. Rutledge	1893	6.5	2.4	2.1	1.75	1.8
6	♀ Juv.	Ditto ...	Ditto	1893	7.5	3	5	3.25	2.75
7	♂ Juv.	Ditto ...	Ditto	1893	7.75	2.7	4.5	2.3	2.75

*Distribution*:—Himalayas from Kashmir to Bhutan, Siwalik Hills (Kinloch), Naga Hills (Butler).

*Record Head*:—Length 8.5 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 151).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 516, and Pocock, *P. Z. S.*, 1908, p. 173.



*Nemorhaedus goral*,  $\frac{1}{3}$ rd scale.



# NEMORHÆDUS SUMATRAENSIS, Gray.

(THE KAMBING UTAN OR KAMBING GURUN.)

No.	Sex	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	Arakan ...	Col. Phayre	1844	?	?	9.5 *	5.75	1.75
2	?	?	?	?	?	?	6.75	4.5	3.5
3	♂	Tenasserim	Maj. Berdmore	1861	11.75	4	6.75	4.5	...
4	♂	Chittagong Hill Tracts	J. T. Jarbo	1879	12.5	3.5	6.75	4.5	2.5
5	♂	Ditto	Ditto	1879	12.25	4	8	5	4
6	♂	Tenasserim	Maj. Berdmore	1861	13	4	8.5	5.25	4.25
7	♂	Province Wellesley	India Mus., London	?	12	3.75	8.5	5.25	2.75
8	♂	Tenasserim	Maj. Berdmore	1861	11	4	7	4.25	2.75
9	♂	Ditto	Ditto	1861	11.3	4.25	8.25	4.75	4.3
10	♀	Shillong, Assam	C. R. Cock	1879	11	4	8	5	4.25
11	♂	Assam ...	Ditto	1879	?	?	7.25	4.5	5.5

*Distribution*.:—Assam, Burma, the Malay Peninsula and Sumatra.

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 514, and Pocock, *P. Z. S.*, 1908, p. 173.

\* Record.



1

6

7

*Nemorhædus sumatraensis*,  $\frac{1}{4}$ th scale.



# BUDORCAS TAXICOLOR, Hodgson.

(THE TAKIN.)

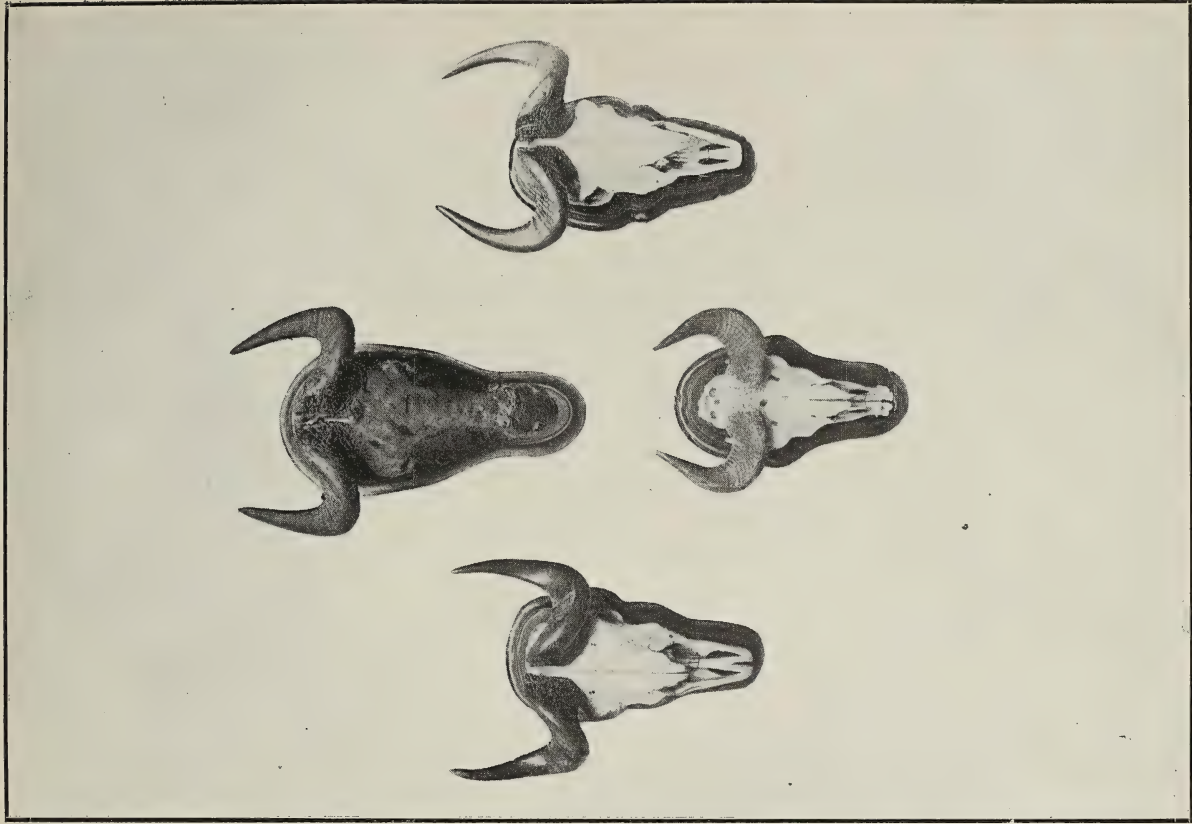
No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♀	Mishmi Hills, Assam	F. Jenkins	1850	?	?	9.5	7.3	14.25
2	♂	Ditto	Ditto	1850	?	?	15.25	8.5	10.3
3	♂	Ditto	Ditto	1850	?	?	24.5*	11.5	12.8
4	♂	Ditto	E. T. Dalton	1856	?	?	22.4	11.8	10.5
5	♂	Ditto	Dy. Commissioner	1882	17.5	6	20.25	11.75	8.6
6	♂	.....	A. R. Comber	1867	16.25	6.5	21.25	11.6	12.75
7	♂	Mishmi Hills, Assam	Maj. W. Brydon...	1884	14.76	5.5	15.6	9.8	7.25
8	♂	Assam	Lt.-Col. Graham	1879	?	?	20.75	10.3	9.25
9	♀	Mishmi Hills, Assam	F. Jenkins	1850	?	?	9.5	7.8	13.5
10	♂	Ditto	Ditto	1850	?	?	14.8	9.66	8.5
11	♂	Eastern Tibet	J. White	1906	13.25	5.75	13.75	9.75	6.25
12	♀	Mishmi Hills, Assam	Deputy Commissioner.	1882	...	5.25	12.5	8.75	11

*Distribution*:—The Mishmi Hills, Assam, through Eastern Tibet; probably to China.  
*Cf.* Hodgson, *Journal As. Soc., Bengal*, xix, p. 65, and Milne-Edwards, *Réch. des Mammifères*, p. 367.

\* Record.



*Budorcas taxicolor*,  $\frac{1}{10}$ th scale.



*Budorcas taxicolor*,  $\frac{1}{10}$ th scale.



# BOSELAPHUS TRAGOCAMELUS, Solater.

(THE NILGAI.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	?	S. Sherwill	1843	14.75	3.75	4.75	3	4
2	♂	Alwara, Junna R. ...	J. Cockburn	1881	17.8	5	8.75	7.6	4.25
3	♀	Banda Dist. ...	Ditto	1881	16.25	4.25	...	...	...
4	♀	Ditto	Ditto	1881	15.8	4	...	...	...
5	♂	Cawnpore ...	Ditto	1872	15.5	4.3	7.25	7.25	4.6
6	♂	Ditto	A. S. B.	?	16.75	5.3	6.75	6.75	6.3
7	♂	Ditto	Ditto	?	16.8	5.25	6.75	6.5	4.4
8	♂	Ditto	Ditto	?	?	?	6.25	4.75	7.5

*Distribution*.—The Peninsula of India, from the foot of the Himalayas to Cape Comorin, excluding Lower Bengal and Ceylon.

*Record Head*.—Length 11.75 in. Circumference 9.5 in. (Not now in existence; cf. Lydekker, *Game Animals of India*, etc., pp. 166, 167.)

Cf. Blanford, *Fauna of British India*, Mammalia, p. 517.



5

12

8

*Boselaphus tragocamelus*,  $\frac{1}{10}$ th scale.



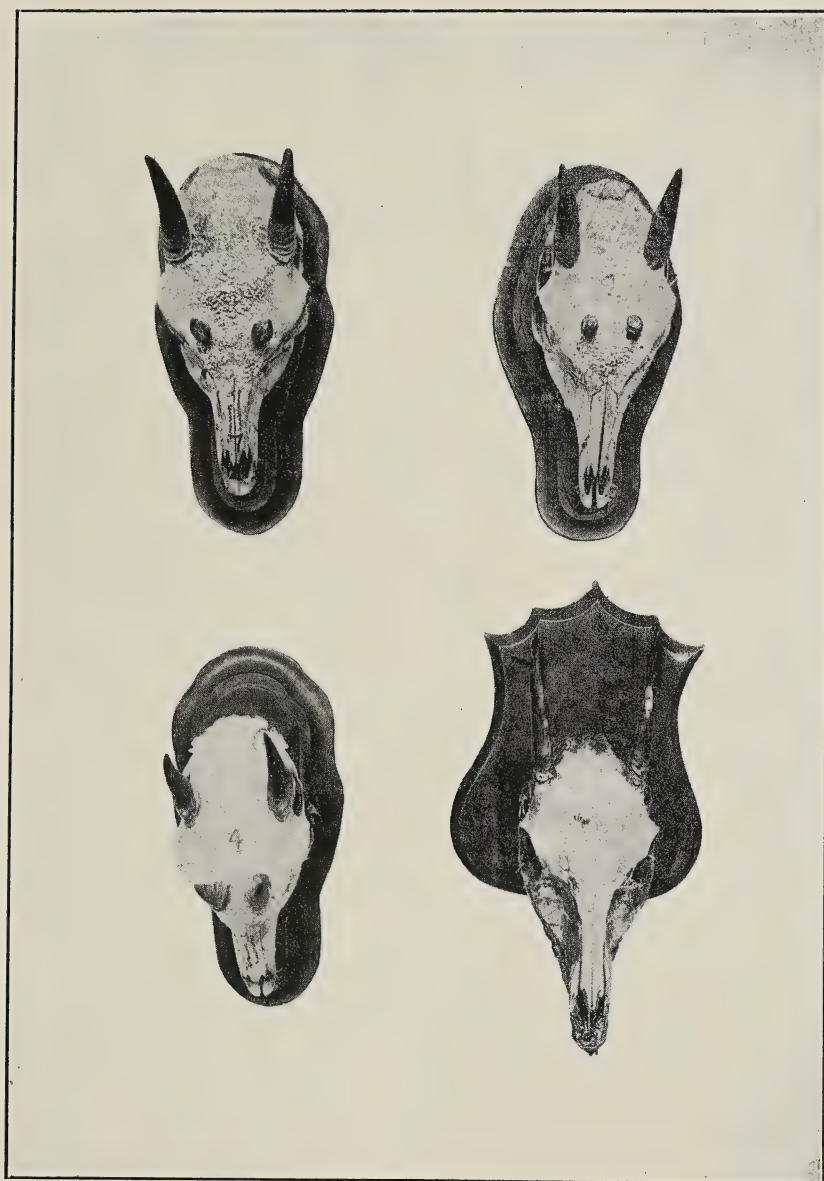
# TETRACERUS QUADRICORNIS, Gray.

(THE FOUR-HORNED ANTELOPE.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn, small and large.	Circumfer- ence, small and large.	Tip to tip, small and large.
1	♂	S. India	Sir W. Elliot	1845	8	3.5	1.75 3.25	2.25 2	1.5 2
2	♂	Raniganj	Babu Mullick	1872	8	3.25	.5 2.5	1.5 2	1 2.5
3	♂	Asirgarh, C. P.	W. T. Blanford	1866	...	...	... 3.8	1.5 2	1 2.75
4	♂	India	J. B. Lawson, Esq.	1844	7	3.25	1.75 3.25	... 2	1.75
5	♂	S. India	Sir W. Elliot	1845	7.5	3	1.5 2.75	1.75 2.25	1.5 4
6	♂	Ditto	Ditto	1845	7.75	3	... 2.25	... 1.75	... 2.25
7	♂	Ditto	J. Cockburn	1886	8.25	3.5	.5 3.25	1.25 2.25	1.5 2.75

*Distribution*:—Through the Peninsula of India, in wooded and hilly tracts, especially the Central Provinces; absent in the Gauges valley and Ceylon.

*Record Head*:—Length of large horn 5 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 172).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 519.



*Tetracerus quadricornis*,  $\frac{1}{4}$ th scale.

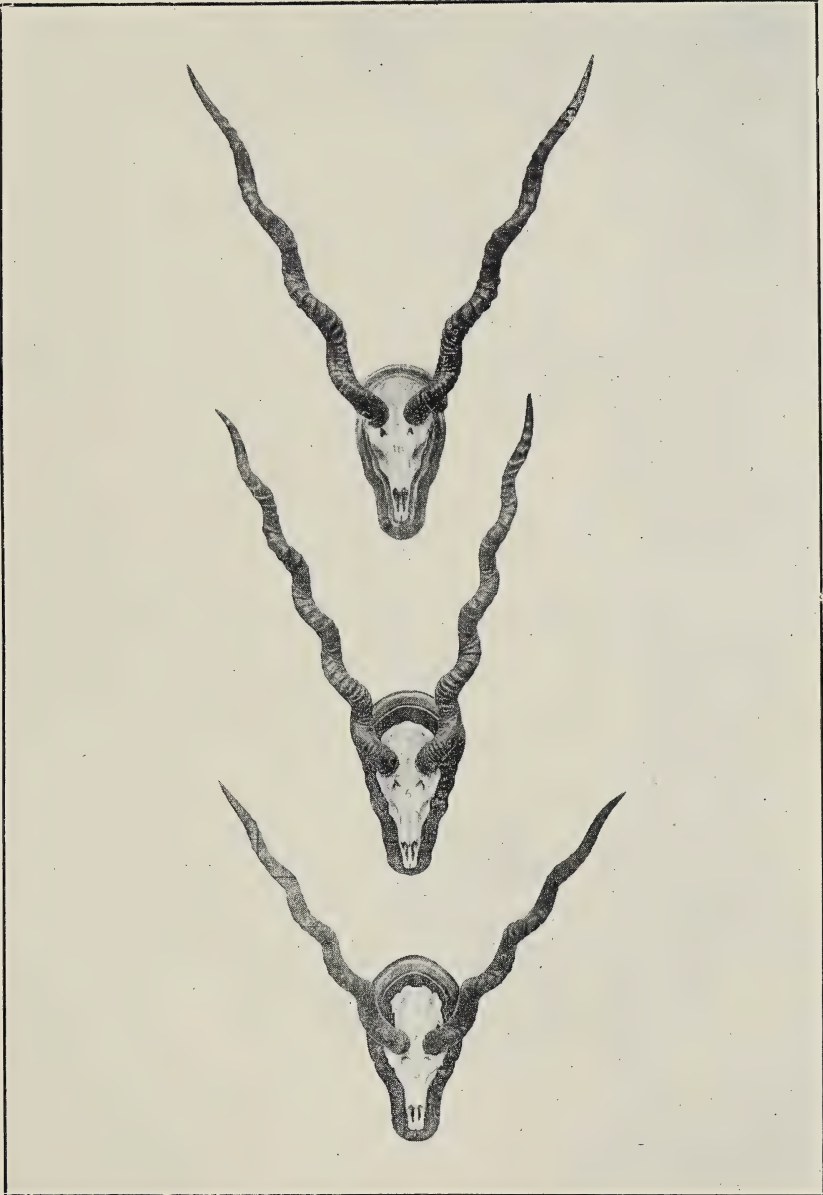


# ANTILOPE CERVICAPRA, Pallas.

(THE INDIAN ANTELOPE OR BLACK BUCK.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn round curve.	Circumfer- ence.	Tip to tip.
1	...	Banda District	J. Cockburn	1879	8.75	3.5	25.25	4.75	14.25
2	...	?	W. Rutledge	1870	9.5	3.5	*27.25	4.75	11.75
3	...	Banda District	Ditto	1881	8.75	3.25	30.5	4.5	16
4	...	?	J. J. Attanass	...	9.5	3.5	*10.5	4.75	...
5	...	No history	?	?	9.25	3.5	28.75	5	6
6	...	Karnal District, Punjab.	S. J. Stone	1891	9.75	3.75	19.25	4.75	18
7	...	Banda District	J. Cockburn	1881	9	3.5	27	5	17.75
8	...	Karnal " Punjab	S. J. Stone	1891	8.75	3.5	30.5	4.25	21.75
9	...	Banda District	Rajah R. Mullick	1870	8.5	3.25	17.75	4.75	11.8
10	...	Punjab ...	S. J. Stone	1891	9.25	3.75	31.8	4.75	23
11	...	Ditto ...	Ditto	...	8.6	3.8	31.3	4.75	21.5
12	...	Banda District	J. Cockburn	1881	...	...	22.5	5.25	12.5
13	...	?	J. J. Attanass	1842	9.75	3.5	29.25	4.8	15.25
14	...	Doon of Assam	F. Jenkins	..	...	..	30.25	4.9	13
15	...	Banda District	J. Cockburn	1881	8.8	3.25	20.25	4.25	7.9
16	...	?	?	?	?	3.25	22.75	3.5	13
17	...	Agra ...	J. Cockburn	1879	9	3.75	30.3	5	16.5
18	...	Banda District	Ditto	1881	9	3.75	26.25	5.25	14.5
19	...	Allahabad District	Ditto	1879	8.5	3	23.75	4	14.25
20	...	?	?	?	10.25	3.25	30.75	5	11.25

\* Horns deformed



10

6

8

*Antilope cervicapra*,  $\frac{1}{2}$ th scale.



# ANTILOPE CERVICAPRA, Pallas—*contd.*

(THE INDIAN ANTELOPE OR BLACK BUCK)—*contd.*

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn round curve.	Circumfer- ence.	Tip to tip.
21	...	"Bokhara"	?	?	9.25	3.25	26.25	4.8	10.5
22	...	Allahabad	J. Cockburn	1879	?	3.5	23.75	4.75	15.5
23	...	Banda District	Ditto	1881	8.8	3.25	21.9	4.75	12.25
24	...	?	?	?	8.75	3.25	21	4.4	12.5
25	...	Banda District	J. Cockburn	1879	9.25	3.3	19.25	4.75	40
26	...	Chanda	Mrs. Turnbull	1837	8	2.5	9.75	...	...

*Distribution*:—The plains of India from the foot of the Himalayas to Cape Comorin and from the Punjab to Lower Assam; Lower Bengal at Midnapore and Orissa; unknown in Ceylon, the Malabar Coast and the Ganges Delta.

*Record Head*:—Length not round curve 28.25 in. Round curve 40.5 in. (*cf.* Rowland Ward, *Horn Measurements*, p. 95).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 521.



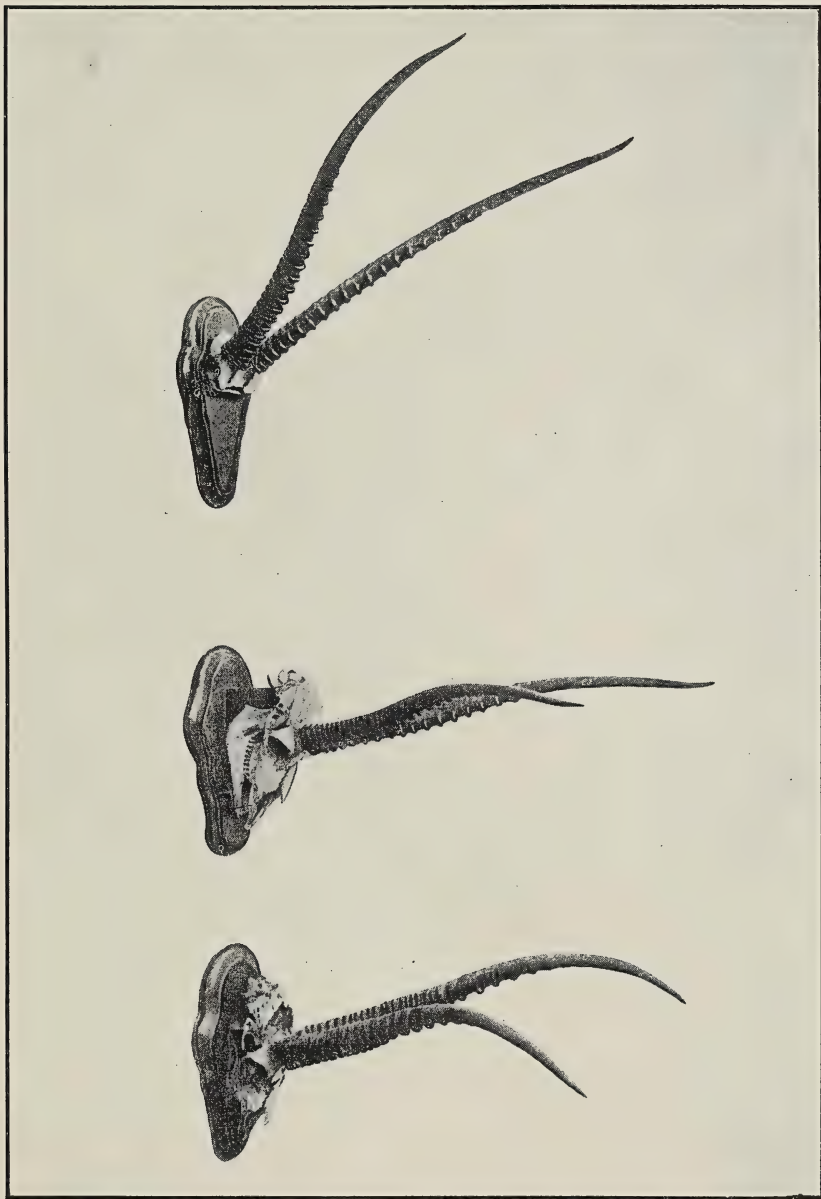
# PANTHOLOPS HODGSONI, Hodgson.

(THE CHIRU.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Tibet	L. Mandelli	1877	?	?	26·3	5·25	15·5
2	♂	Ditto	Ditto	1877	10·5	3·75	23·5	4·75	14·25
3	♂	Ditto	Ditto	1877	?	?	23·5	5·5	11·75
4	♂	Ditto	Ditto	1877	?	?	23·25	5·75	12·5
5	♂	Kum Ladak	J. Biddulph	1873	?	?	24·25	5·5	14·5
6	♀	Yarkand	Dr. F. Stoliczka...	1873	10	3	...	...	...
7	♂	"Almora Dist."	Purchased	1908	?	?	25·25	6	15
8	♂	Ladak	J. Biddulph	1873	10·25	3·5	22·5	5·25	12·25

*Distribution*:—Tibet from 12,000 to 18,000 ft., from Ladak eastward; also found in North Sikkim.  
*Record Head*:—Length 27·75 in. Circumference 6·12 in. Cf. Rowland Ward, *Horn Measurements*, p. 102.  
Cf. Blanford, *Fauna of British India*, Mammalia, p. 524, and Lydekker, *Game Animals of India*, p. 155.





*Pantholops hodgsoni*,  $\frac{1}{12}$ th scale.

## GAZELLA SUBGUTTUROSA, Blainville.

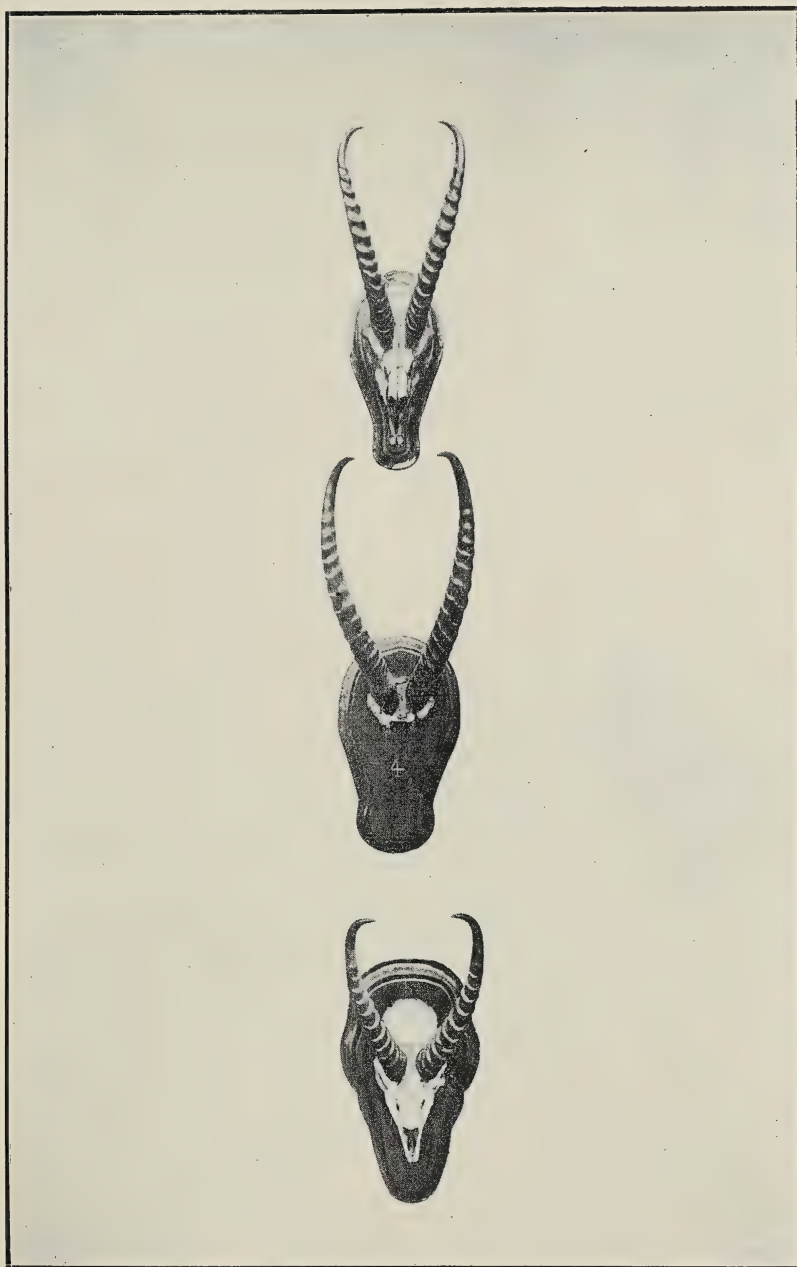
(THE PERSIAN GAZELLE.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♀	Yarkand	Dr. F. Stoliczka...	1874	8.25	2.75	9.5	4.5	4.25
2	♂	Near Ispahan	Sir O. St. John ..	1870	8	2.75	9.5	4.25	6.5
3	♂	Yarkand	J. Scully	1875	6.75	2.5	9.5	4.5	4.5
4	♀	Ditto	Ditto	1889	?	?	16*	5	3.75
5	♂	Kandahar	T. Hutton	1846	?	2.5	11.5	4	2.75
6	♂	Ditto	H. B. Lumsden ...	1859	?	?	10.5	4.25	1.8
7	♂	Kashgar	Dr. F. Stoliczka ...	1874	8.25	2.5	11.25	4.5	3.25
8	♀	"Persian Gulf"	J. Murray	1880	7.75	2	12.25	3.75	8.5
9	♂	Kuhak, Seistan	A. H. McMahon...	1906	8	2.8	12.75	4.4	3.3
10	♂	Ditto	Ditto	1906	7.9	2.75	11.1	4.35	3.5
11	♂	Ditto	Ditto	1906	8	2.5	12.5	4.3	1.75
12	♂	Ditto	Ditto	1906	7.75	2.7	15	4.5	1.25
13	♂ Juv.	Ditto	Ditto	1906	7	2	5.1	3	Horns touch.
14	♂ Juv.	Ditto	Ditto	1906	6	2	1.25	1.5	1.65
15	♂	...	...	...	8.5	2.75	13	5.25	2
16	♂	Yarkand	Dr. F. Stoliczka ...	1874	8	2.5	10.5	4.25	3.25

*Distribution*:—The highlands of Persia and Afghanistan extending westward as far as Tiflis, northward all over Russian Turkestan, and eastward to Yarkand; not found on the shores of the Persian Gulf, being there replaced by *G. bennetti*.

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 528.

\* Record.



*Gazella subgutturosa*,  $\frac{1}{8}$ th scale.



# GAZELLA PICTICAUDATA, Brooke.

(THE GOA OR TIBETAN GAZELLE.)

No.	Sex.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	♂	Tibet	No history	...	...	...	11.75	3.5	4.5
2	♂	Do.	F. Jenkins	1846	?	2.75	13.25	3.5	8.75
3	♂	Do.	Do.	1846	?	...	13.3	3.75	5.25
4	♂	Kukchu near 15,000 ft.	N. Elias	1879	7.75	2.5	11.75	3.75	4.75

*Distribution*.:—The Tibetan plateau, 13,000 to 18,000 ft.

*Record Head*.:—Length 14.75 in. (*cf.* Rowland Ward, *Horn Measurements*, Appendix, p. 5).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 529.

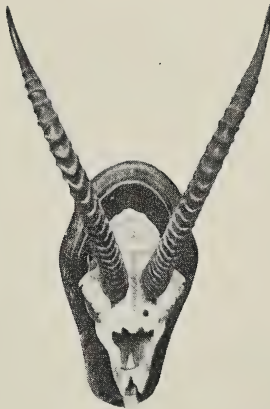
1



2



3



*Gazella picticaudata*,  $\frac{1}{3}$ th scale.

## GAZELLA BENNETTI, Gray.

(THE INDIAN GAZELLE.)

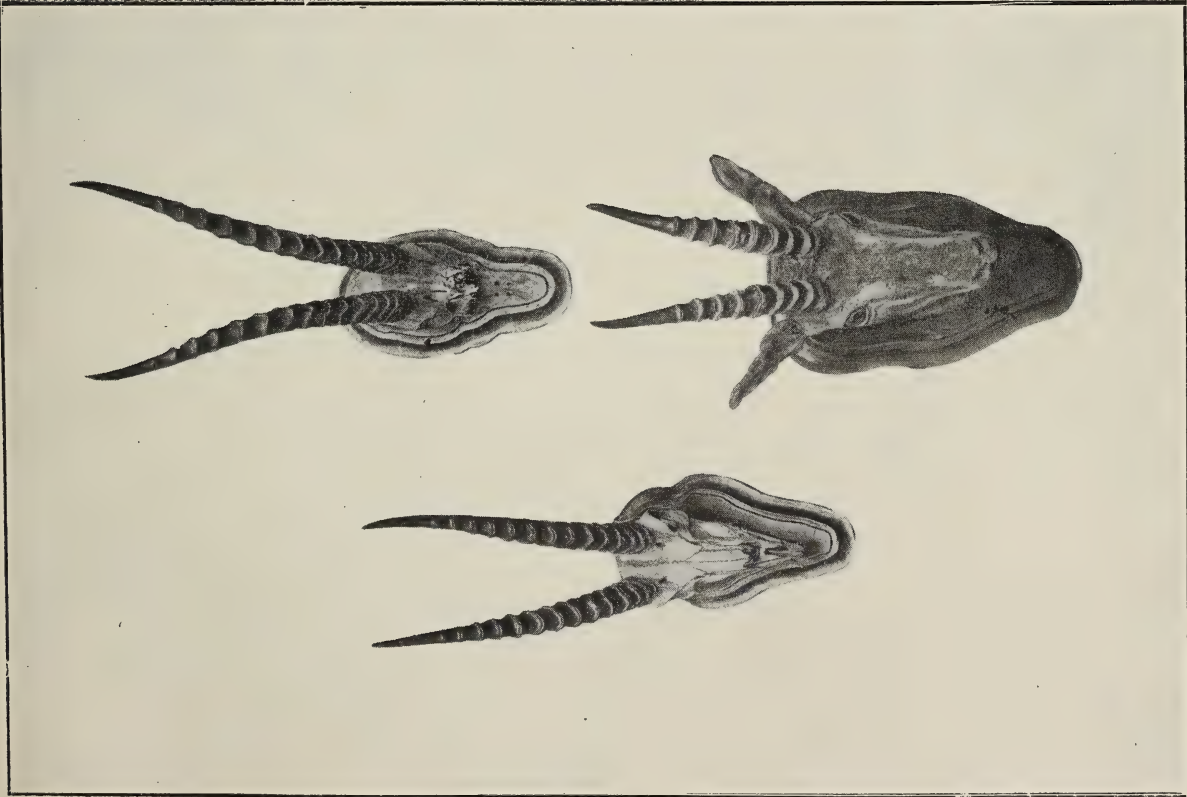
No.	Sex.	Locality.	Donor	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	♂	Pubb Hills, Sind	Karachi Mus.	1879	?	?	10.5	3.75	6.5
2	♂	Sind	W. T. Blanford	1870	?	?	10.3	3.75	4.75
3	♂	Chanda, C. P.	Mus. Coll.	1867	?	?	9	4	6.25
4	♂	Sind	W. T. Blanford	?	?	?	5.25	3.25	2.25
5	♂	Allahabad Dist.	J. Cockburn	1879	6.5	2.5	7.75	3.75	3.25
6	...	?	Zool. Gardens	?	6.75	2.5	4.75	1.75	4.25
7	...	Banda Dist., U. P.	J. Cockburn	1879	7.5	2.8	9.25	3.5	2.75
8	...	?	Zool. Gardens	?	7.75	2.75	9.75	4.3	4.5
9	...	Allahabad Dist.	J. Cockburn	1879	?	2.5	9.25	4	4.8
10	...	?	?	?	?	?	7.5	3.75	4
11	...	Allahabad Dist.	J. Cockburn	1879	6.5	2.75	9.25	4	3.5
12	...	Banda Dist.	Ditto	1881	7.75	2.5	12	3.75	6
13	...	Banda	Ditto	1879	?	?	5.75	1.8	1.75
14	...	Pind Dadan Khan	W. Theobald	1853	8.25	2.75	10	4	3.75
15	...	Pubb Hills, Sind	Karachi Mus.	1879	8	2.5	7.5	3.75	2.5
16	♂	Maytina	Ditto	1879	8	2.5	10.75	4	4.5
17	♂	.....	Ditto	1879	8	2.75	12	4.25	6.5
18*	♀	Jalk, Baluchistan, 3,000 ft.	W. T. Blanford	1872	7	2.25	5.25-7.5	1.75	3.25

*Distribution*.:—North-Western and Central India through Baluchistan to Bushire; absent on Malabar Coast, in Ceylon, Lower Bengal and the Western Ghâts of the Bombay Presidency.

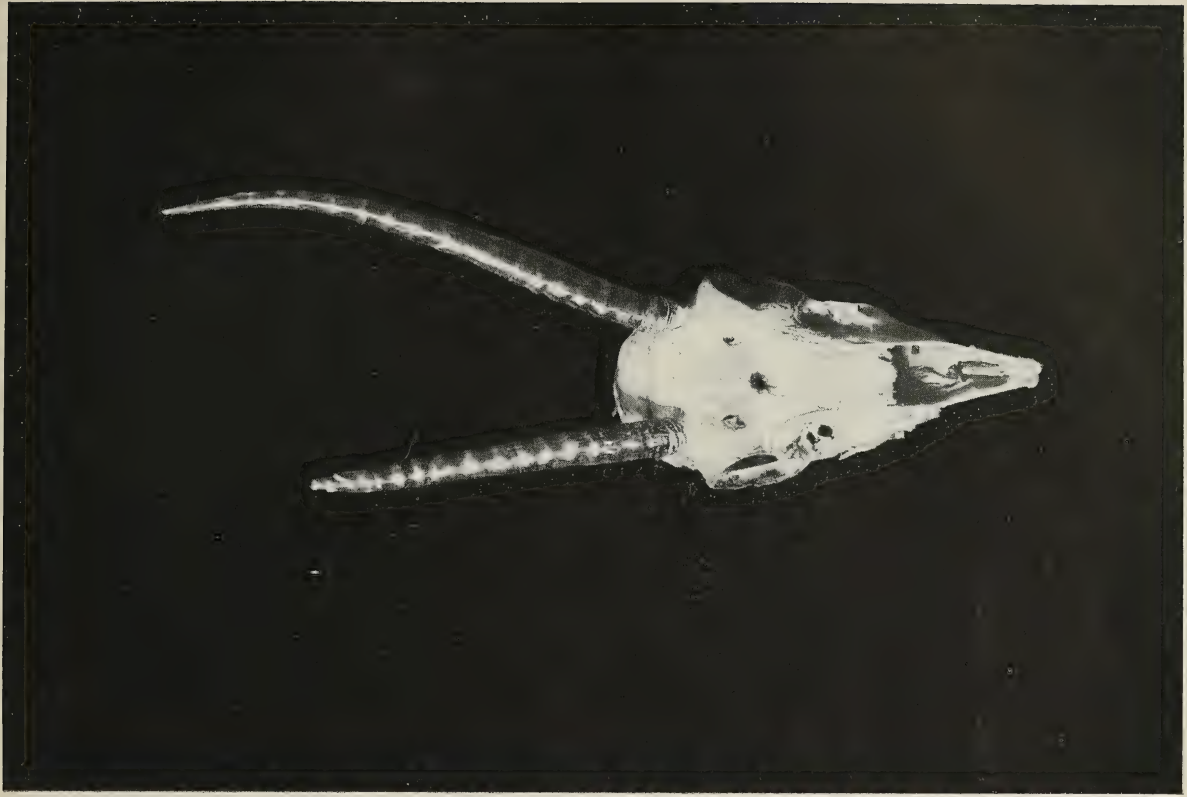
*Record Head*.:—Length 15 in. Circumference 5 in. (*cf.* Lydekker, *Game Animals of India*, p. 202).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 526.

\* Type of Blanford's *Gazella fuscifrons*.





*Gazella bennetti*,  $\frac{1}{4}$ th scale.



*Gazella bennetti*,  $\frac{1}{3}$ rd scale.  
Type of Blanford's *G. fuscifrons*.

# **CERVUS CASHMEERIANUS, Falconer.**

(THE KASHMIR STAG OR HANGUL.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Tip to tip.	Points.
1	Kashmir Valley	...	1878	15.25	5.75	33	6	23	5.5	5 × 5
2	?	R. Lydekker	?	?	?	41	6.5	...	...	6 × 6
3	?	No history	?	?	?	40.8	4.75	30.25	15.75	6 × 5
4	?	Do.	?	?	?	23.5	5.75	...	...	3 × 4
5	Upper Wurdwan, Kashmir.	Do.	1887	15.5	5.25	36.5	5.5	23.6	37.25	5 × 5
6	?	S. J. Stone	?	?	?	27	4.25	24.25	25.75	5 × 4
7	Purchased	No history	1872	?	?	32.75	5.75	...	...	5
8	.....	R. C. Beavan	1865	?	?	34.75	6	...	...	6
9	Bokhara	Purchased	1872	?	?	29.5	5.5	...	...	5
10	Oxus R. nr. Balkh	C. E. Yate	1887	?	?	23	4.75	...	...	4

*Distribution* :—Kashmir pine forests between 9,000 and 12,000 ft.

*Record Head* :—Length 48.5 in. (cf. Lydekker, *Game Animals of India*, etc., p. 213).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 535.



*Cervus cashmeerianus*,  $\frac{1}{8}$ th scale.



## CERVUS AFFINIS, Hodgson.

(THE SHOU.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Tip to tip.	Points.
1	Near Phari, Tibet ...	Sir A. Eden	1882	17.25	6.25	43	7	41.25	46.25	5 x 6
2	Near Dhoulagiri, Tibet.	Barrackpore Menagerie.	1856	?	?	42	6.25	...	...	...
3	Near Phari, Tibet ...	A. Campbell	1851	16.75	5.75	37.75	6.75	36.75	40.25	5 x 5
4	Sikhim	J. Mandelli	1877	?	?	46.75	5.75	36.25	20	5 x 5

*Distribution* :—Eastern Tibet and the Chumbi Valley to Sikhim.

*Record Head* :—Length 55.75 in. Circumference 6.5 in. Tip to tip 17.25 in. (*cf.* Rowland Ward, *Horn Measurements*).

*Cf.* Lydekker, *Game Animals of India*, p. 218.



*Cervus affinis*,  $\frac{1}{20}$ th scale.

# **CERVUS DYBOWSKII, Sclater.**

(THOROLD'S DEER.)

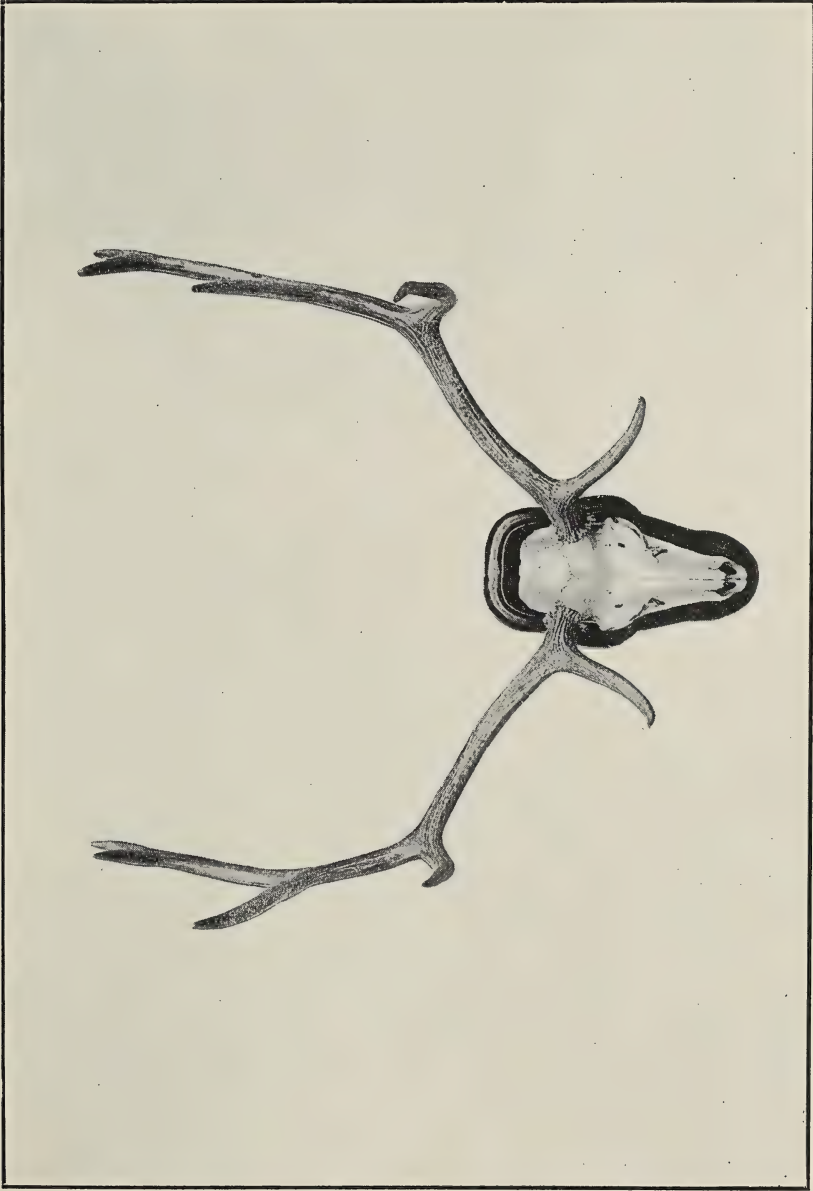
No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
1	"Darjeeling Bazaar"	A. M. Dunne	1888	15.25	5.75	32.25	4.75	33	5 x 5	31.75

*Distribution* :—Tibet.

*Record Head* :—Doubtful.

*Cf.* W. L. Sclater, *Journ. As. Soc. Bengal*, vol. lviii, p. 186 ; and Lydekker, *Deer of all Lands*, p. 91.





*Cervus dybowskii*, 1<sup>st</sup> scale.

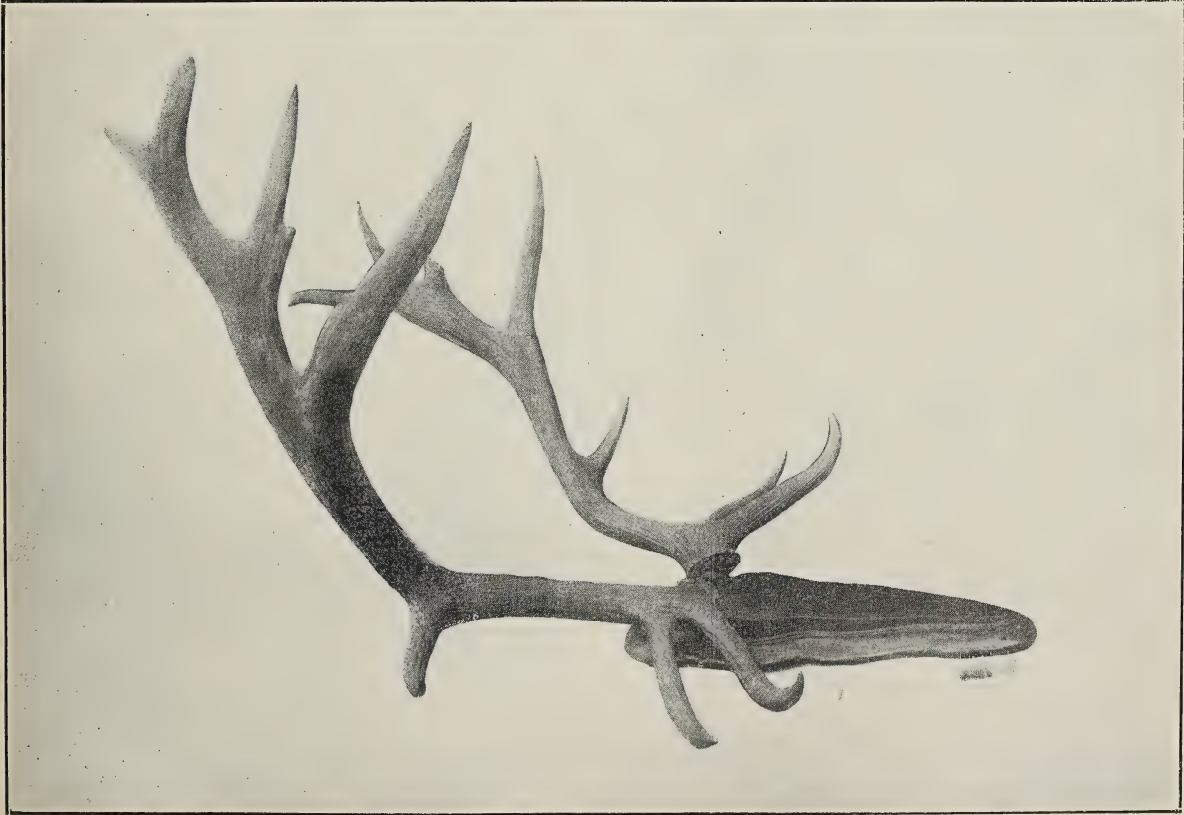
# CERVUS EUSTEPHANUS, Blanford.

(THE ALTAI WAPITI.)

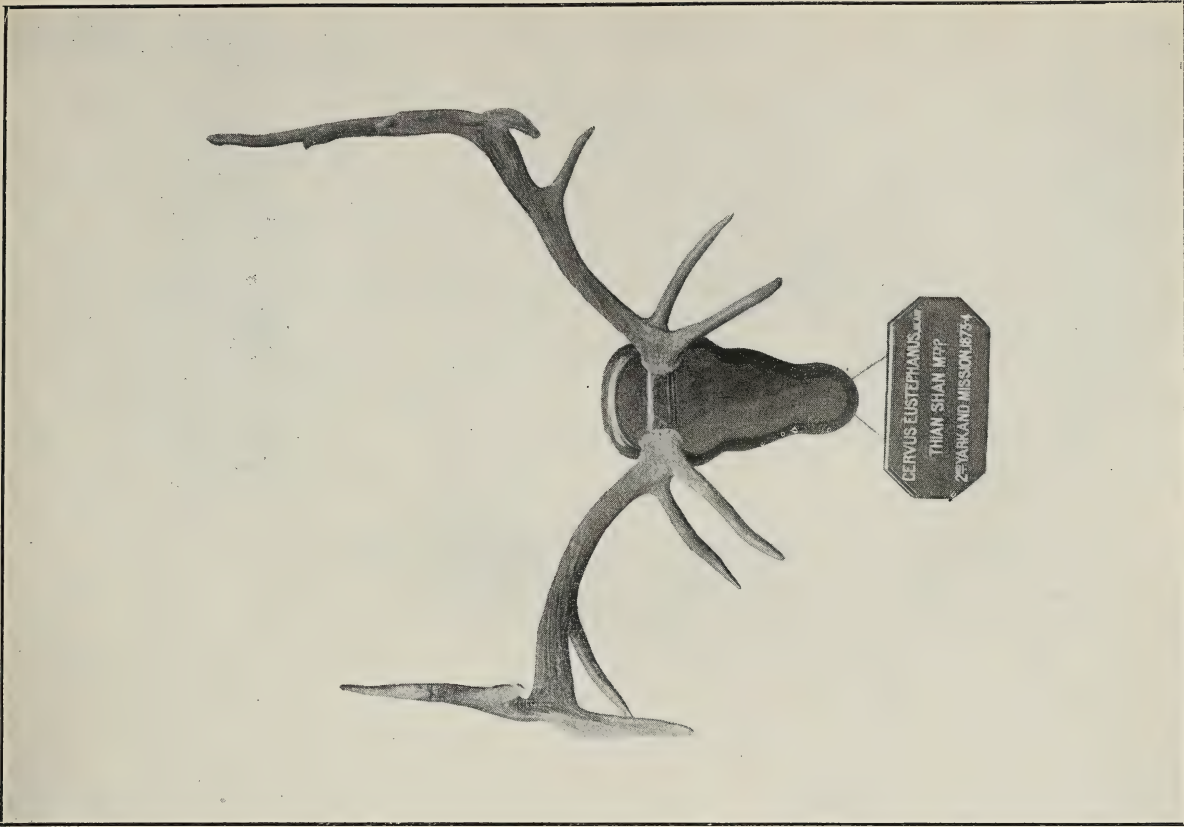
No.	Locality.	Donor.	Year.	Length of horn.	Circumference.	Points.
* 1	Thian Shan Mts.	Dr. F. Stoliczka	1874	51·5, 50·1	10·9, 10·5	8 × 7

*Distribution*:—The Altai and Thian Shan Mountains.  
*Note*:—Probably these two horns were not from the same animal.  
*Cf.* Blanford, *Proc. Zool. Soc.*, 1875, p. 637.

\* Type of Blanford's *Cervus eustephanus*. Record.



*Cervus euslephanus*,  $\frac{1}{12}$ th scale.



*Cervus euslephanus*,  $\frac{1}{13}$ th scale.



## CERVUS SIKA, Temminck.

(THE COMMON SIKA.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
1	Japan	...	1884	11.75	4.25	23.5	4.25	18.75	4 x 4	20.25

*Distribution*:—Japan and Northern China.

*Record Head*:—Length 31.25 in. Circumference 5.25 in. Tip to tip 27.2 in. (*cf.* Rowland Ward, *Horn Measurements*, p. 25).

*Cf.* Lydekker, *Deer of all Lands*, p. 113.



1

**CERVUS SIKI TEM**  
**THE JAPANESE DEER**  
**HAKODATE MUSEUM**

*Cervus sika*,  $\frac{1}{4}$ th scale.

# **CERVUS TAËVANUS, Blyth.**

(THE FORMOSAN SIKĀ.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Tip to tip.	Points.
*1	Formosa	... R. Swinhoe	1860	10.75	3.75	14	3.25	8.5	7	4 x 4

*Distribution*:—The Island of Formosa.  
*Cf. Blyth, Journ. As. Soc. Bengal*, vol. xxix, p. 90.

\* Type of Blyth's *Cervus taëvanus*.





1

*Cervus taëvanus*,  $\frac{5}{12}$ th scale.

## CERVUS ARISTOTELIS, Cuvier.

(THE SAMBAR.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
1	No history	J. Pybus	1847	?	?	30.5	6.75	16	3 x 3	14.25
2	Ditto	Ditto	1847	?	?	22.25	4.75	18.5	3 x 3	18
3	Ditto	Ditto	1847	?	?	23.5	4.75	13.75	3 x 3	11.25
4	Ditto	Ditto	1847	14.25	4.75	17	4	12.75	3 x 3	14.75
5	Assam	Col. Jenkins	1846	15	5.5	20.5	6	12.8	3 x 3	8.5
6	Arakan	Col. Phayre	1847	15	4.8	20.5	4.75	15.5	3 x 3	15.75
7	Ditto	Ditto	1847	?	?	23.5	4	16.8	3 x 3	13.5
8	Ditto	Ditto	1847	?	?	24.8	4.5	20.5	3 x 3	19.5
9	Assam	E. V. Westmacott	1866	14	4.75	22.75	4.6	...	...	...
10	No history	J. Pybus	1847	14.5	4.25	12.75	4.5	9.5	3 x 3	9.5
11	Ditto	Ditto	1847	14	?	23.5	4.5	8.25	3 x 3	8
12	Ditto	Ditto	1847	12.25	4.75	23.3	5.25	18.5	3 x 3	18.5
13	Ditto	Ditto	1847	?	?	29.75	6.25	...	3 x 3	...
14	Central India	S. R. Tickell	1846	?	?	19.5	4.5	21.5	3 x 3	19
15	?	?	?	?	?	34.75	6.75	...	3 x 3	...
16	Banda Dist.	J. Cockburn	1886	?	?	38.75	6.75	27.75	3 x 3	26
17	Coromandel Coast	Purchased	1848	?	?	43	10	...	5 x 4	...
18	Himalayas	J. J. Attanass	1843	16.75	5.3	26.5	5	18.5	3 x 3	11
19	?	?	?	?	?	29.8	6	19	3 x 3	16.25
20	Banda Dist.	J. Cockburn	1886	16.5	5.25	30.75	6	31	4 x 3	26.75
21	No history	J. Pybus	1847	?	?	31.75	6.5	24.25	3 x 3	14.75
22	Ditto	Ditto	1847	?	?	26.75	5.25	24.25	3 x 3	18
23	Assam	Raja R. Mullick	1846	16	5	23.25	6	17.25	3 x 3	14.25
24	No history	J. Pybus	1847	?	?	25.5	5	20.8	3 x 3	19.5



16

15

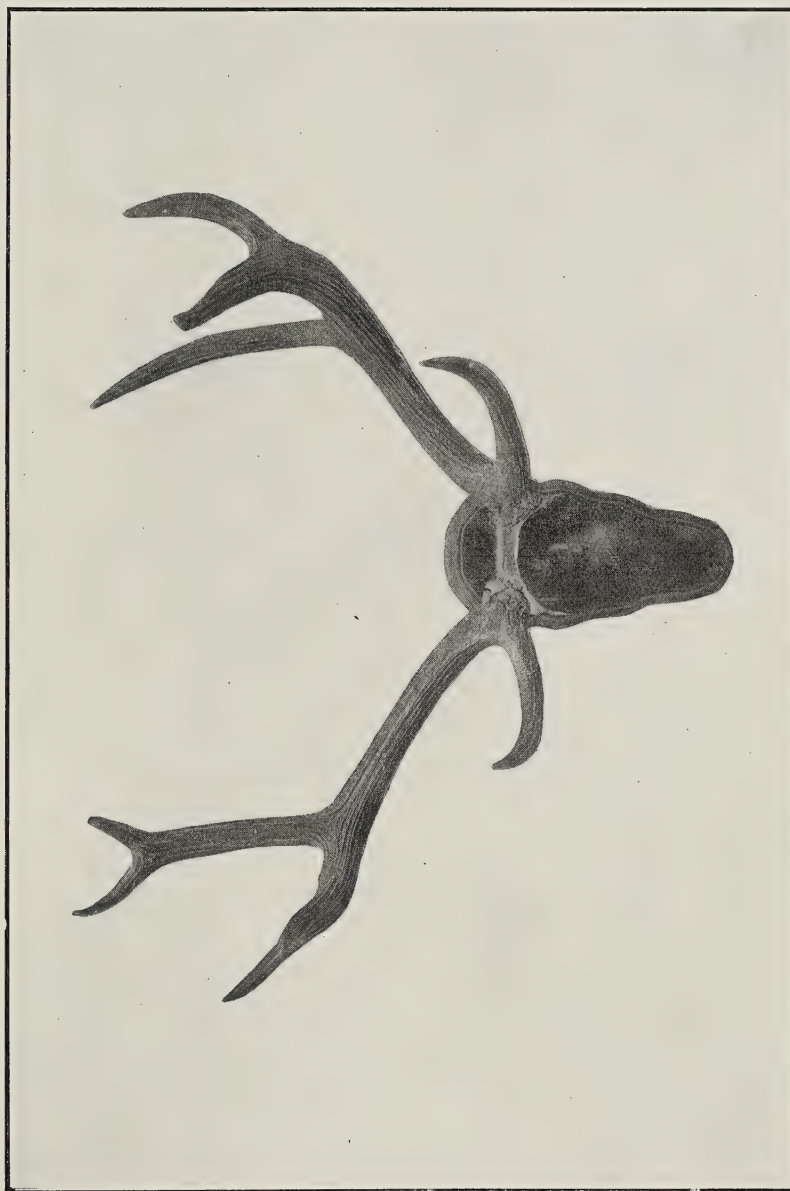
*Cervus aristotelis*,  $\frac{1}{15}$ th scale.



## CERVUS ARISTOTELIS, Cuvier—continued.

(THE SAMBAR)—continued.

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
25	Assam	H. Butcher	1879	?	5.25	25.75	5.25	29.5	3 × 3	29.3
26	Rewah, U. P.	Dr. Waller	1879	16.25	5.8	28.75	5	21.75	3 × 3	...
27	No history	J. Pybus	1847	15.5	6.25	31.5	6.25	31.75	4 × 3	13.75
28	Arakan	Sir A. Phayre	1874	?	?	17.75	5	12.25	3 × 3	9.25
29	Assam	H. Butcher	1879	?	?	22.25	4.75	15.5	3 × 3	15.75
30	No history	O. W. Malet, Esq.	1896	?	?	24.25	5.75	9.75	5 × 6	3.25
31	Ditto	Ditto	1896	?	?	15.25	4	10.25	3 × 3	13
32	Assam	H. Butcher	1879	?	?	24.25	5.8	15.75	3 × 3	15
33	No history	W. Masters, Esq.	1886	?	?	19.25	4	13.75	2 × 3	13.5
34	Almora	No history	?	15.25	4.75	30.25	5.25	15.25	9 × 7	15
35	Mirzapore	J. Cockburn	1886	...	...	40.75	6.75	...	3 × 3	...
36	Ditto	Ditto	1886	...	...	40	6.5	...	3 × 3	...
37	No history	.....	...	...	...	34.5	6.75	...	2	One horn only.
38	Ditto	.....	...	...	...	31.25	6	...	4	Ditto.
39	.....	R. C. Beavan	1865	...	...	26	5	...	4	Ditto.
40	.....	Zool. Gardens	1880	...	...	27.75	5.5	...	4 × 4	...
41	.....	Ditto	1881	...	...	26.5	5	...	3 × 3	...
42	Mirzapore	J. Cockburn	1886	...	...	28.75	7.25	...	3 × 3	...
43	.....	Zool. Gardens	1882	...	...	30.25	5.25	...	3 × 3	...
44	.....	Hon. Justice Nor-man.	...	...	...	27.75	7.5	...	3	One horn abnormal.



*Cervus aristotelis*, 1 $\frac{1}{3}$ th scale.

# **CERVUS ARISTOTELIS, Cuvier—concluded.**

(THE SAMBAR)—concluded.

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
45	.....	R. C. Beavan	1865	...	...	24.75	4.75	...	2	1 horn only.
46	.....	Zool. Gardens ...	1882	...	...	26	4.25	...	3 × 3	Ditto.

*Distribution*:—Throughout the Oriental region in hilly forest tracts. Wanting in Sind, Rajputana, and the Punjab.

*Record Head*:—Length 50.12 in. Circumference 9.38 in. (*cf.* Lydekker, *Game Animals of India*, p. 226).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 543.



# CERVUS UNICOLOR SWINHILL, Brooke.

(THE FORMOSA DEER.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	No. of points.
1	Formosa ...	Zool. Gardens ...	1882	?	?	15.25	3.15	3.3

*Distribution* :—The Island of Formosa.

*Record Head* :—Length just under 20 in. (*cf.* Rowland Ward, *Horn Measurements*, p. 12).

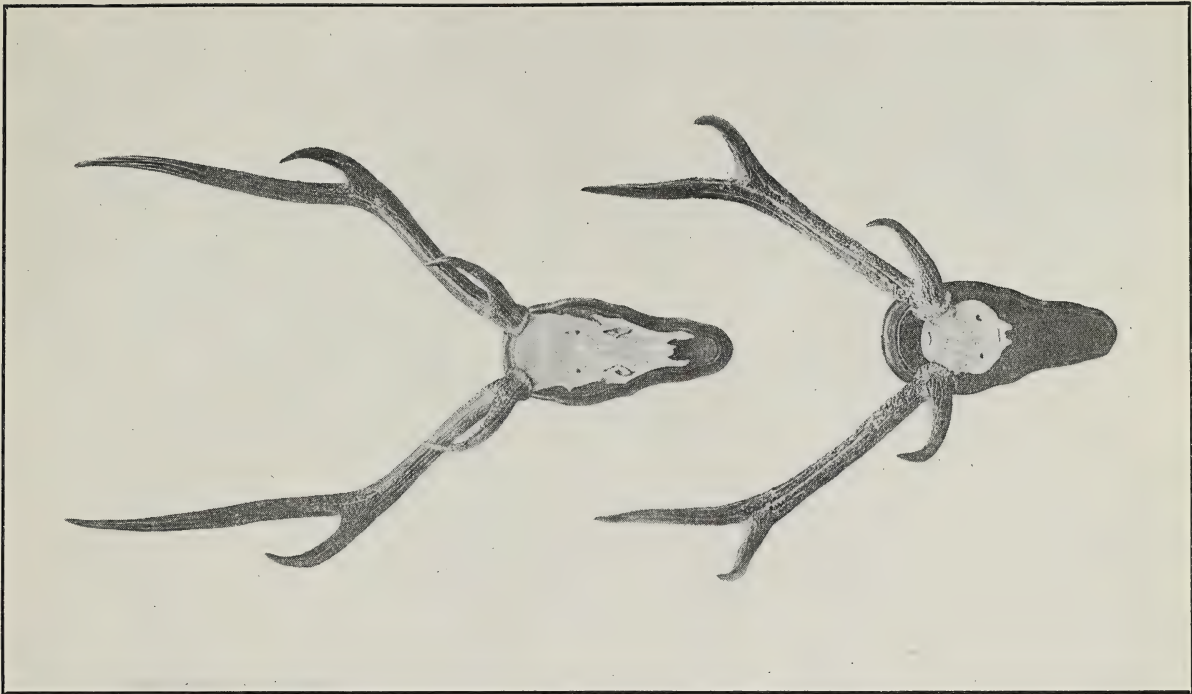
*Cf.* Lydekker, *Deer of all Lands*, p. 154.

# **CERVUS HIPPELAPHUS, Cuvier.**

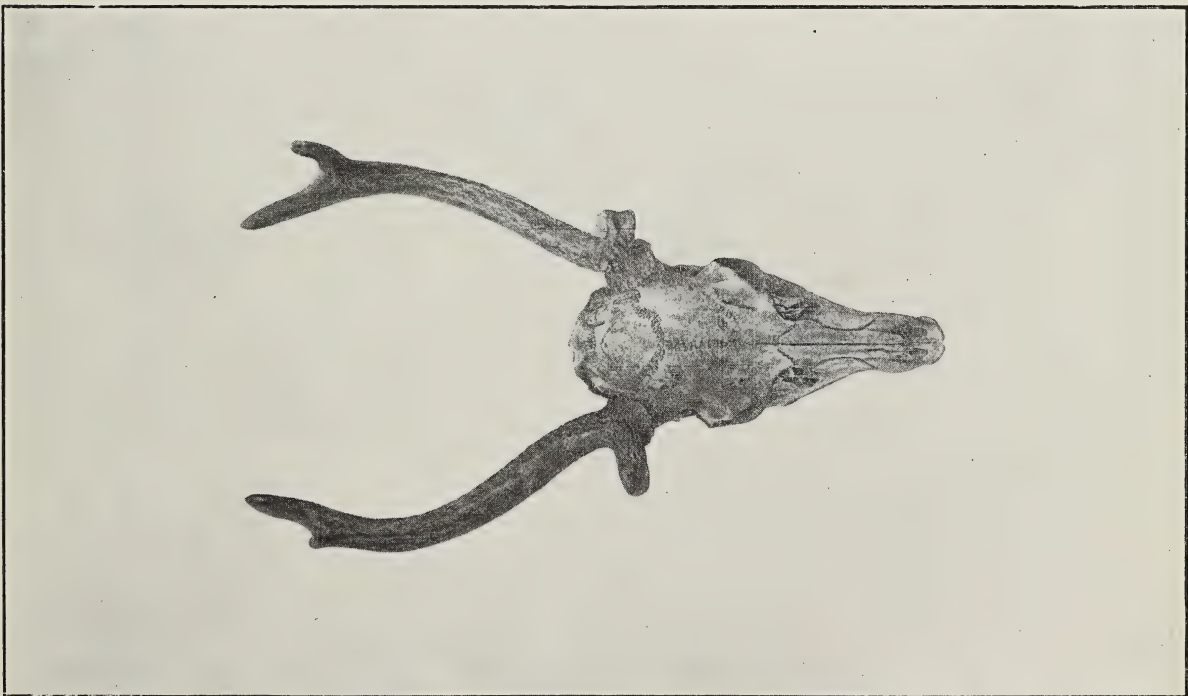
(THE JAVAN SAMBAR.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	Moluccas	Zool. Gardens	1882	11	3.75	11.9	3.25	6.5
2	Ditto	Ditto	1882	?	?	8.3	2.75	7.25
3	Java	Batavian Society	1884	?	?	21.75	5.75	...
4	Ditto	Ditto	1884	?	?	28.5	5.5	16
5	Ditto	Ditto	1884	?	4.25	29.25	5.25	19.5
6	Ditto	Ditto	1884	?	?	28.25	4.75	13
7	Ditto	Ditto	1884	10	3.25	21.25	3.5	13.3
8	Mauritius	Willis Earle, Esq	1842	?	?	28	4.25	15.5
9	Ditto	Ditto	1842	?	?	31.25	5.5	9.5
10	Ditto	Y. Hugon, Esq.	1855	?	?	16.5	3	11.75

*Distribution*:—Java, the Celebes Islands, Timor and the Moluccas. Introduced into Mauritius.  
*Cf.* Lydekker, *Deer of all Lands*, p. 162.



*Cervus himalayensis* 4th skull.



*Cervus himalayensis* 1st skull.



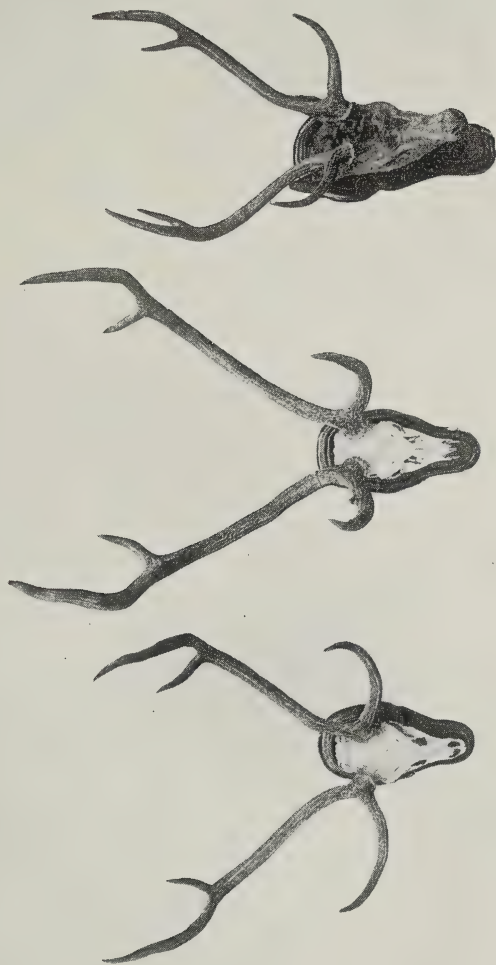
# CERVUS AXIS, Erxleben.

(THE SPOTTED DEER OR CHITAL.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.	Points.
1	?	No history	?	10.75	3.5	16.3	5.25	9.5	3 x 3
2	?	Ditto	?	11.25	3.75	29.75	3.75	22.75	4 x 3
3	?	Ditto	?	?	?	15.75	2.25	13	4 x 3
4	?	Ditto	?	11.25	4.25	30.25	3.75	17.75	3 x 3
5	Manbhoom, Bengal...	R. C. Beavan	1846	?	?	31	4.25	15.5	3 x 3
6	?	Purchased	1842	10.25	3.75	24.25	3.25	15	2 x 2
7	?	Ditto	1842	?	?	33	3.75	20.75	4 x 3
8	Ceylon	E. Higgins	1846	?	?	24	4	15.5	3 x 3
9	?	No history	?	?	?	27.5	4	16.75	3 x 3
10	?	Ditto	?	?	?	29.5	4.25	13.5	3 x 3
11	Manbhoom, Bengal...	R. C. Beavan	1845	9.75	3.75	17.75	3.25	12	3 x 3
12	Mirzapore Dist. ...	J. Cockburn	1886	10.75	4	34.75	4.75	19	4 x 3
13	?	No history	?	?	4.25	15.25	9.75	21.25	2 x 3
14	?	Ditto	?	?	?	29.5	4.25	16.5	5 x 5
15	?	Ditto	?	?	3.75	26.25	3	5.25	3 x 3
16	.....	No history	...	...	...	29	3.75	...	3 (Only one horn.)
17	.....	Zool. Gardens	1882	...	...	20.75	3.5	...	3 x 3
18	.....	Ditto	1880	...	...	19.5	3.5	...	3 x 2

*Distribution*:—Throughout India from the foot of the Himalayas to Cape Comorin and Ceylon. Absent in the Punjab and Assam.

*Record Head*:—Length 38.75 in. (*cf. Asian*, 13th April 1888).  
*Cf. Blanford, Fauna of British India, Mammalia*, p. 546.



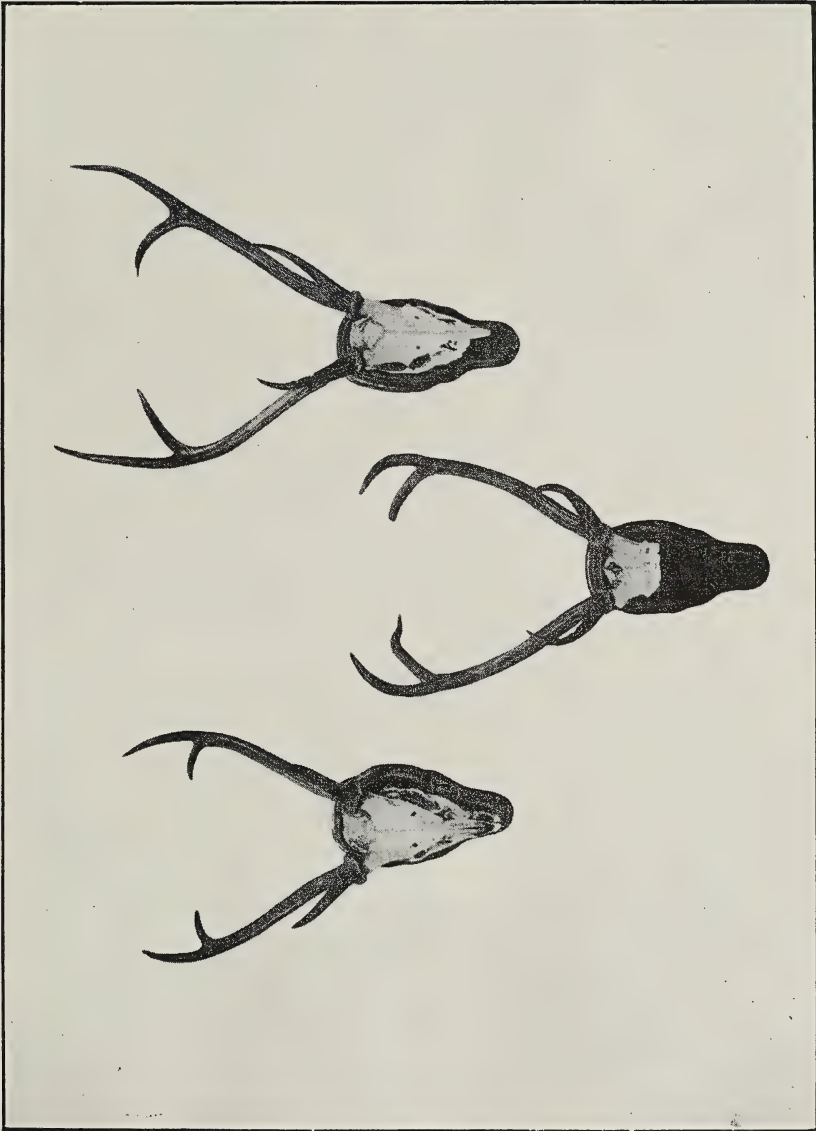
*Cervus axis*, 13th scale.

# **CERVUS PORCINUS, Zimmerman.**

(THE HOG DEER.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
1	Malabar	W. Masters, Esq.	1842	8.25	3.25	18.75	3.25	15.25
2	Assam	H. Butcher	1879	...	...	15.25	3.25	11.25
3	Martaban	R. C. Beavan	1865	...	...	18	2.75	10.25
4	Calcutta	Zool. Gardens	1878	...	...	8.75	2.75	6.25
5	?	Purchased	1844	6.5	2.75	14.25	3	10
6	Assam	H. Butcher	1879	...	...	13.5	2.75	7
7	Do.	Ditto	1879	...	...	18.5	3.5	11
8	?	W. Masters, Esq.	1842	...	...	18.75	2.75	12.25
9	?	Ditto	1842	...	...	15.8	3.1	10
10	Assam	H. Butcher	1879	...	...	14.75	3.75	8.25
11	?	No history	?	...	...	13.25	2.75	8.25
12	Assam	H. Butcher	1879	...	...	8	2.6	6.2
13	Do.	Ditto	1879	...	...	11.25	2.8	9.25
14	Do.	Ditto	1879	...	...	14.75	2.75	10.3
15	Do.	Ditto	1879	...	...	14.75	3	8.5
16	Do.	Ditto	1879	...	...	10.8	2.75	7.75
17	?	No history	1879	...	...	7.25	1.75	...
18	?	Ditto	1879	...	...	6.75	2	...
19	?	Ditto	...	...	...	15.5	2.75	...
20	?	Ditto	...	...	...	14.75	2.75	6.75
21	Assam	H. Butcher	1879	...	...	13.25	2.75	10.5
22	Martaban	R. C. Beavan	1865	...	...	20.5	3.25	8.25
23	.....	No history	...	...	...	14.5	2.75	6.5
24	Assam	H. Butcher	1879	...	...	16.5	2.75	8





*Cervus porcinus*,  $\frac{1}{10}$ th scale.

**CERVUS PORCINUS, Zimmerman—continued.**

(THE HOG DEER)—continued.

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Tip to tip.
25	Assam	H. Butcher	1879	...	...	17.5	3.75	2.75
26	?	No history	...	...	...	14.75	2.75	...
27	?	Ditto	...	...	...	17.25	2.8	13
28	?	Ditto	...	...	...	18.25	3.6	5
29	Calcutta	Zool. Gardens	...	...	...	13.25	2.75	7.5
30	?	No history	...	...	5	15.25	3.25	9.5
31	Calcutta	Zool. Gardens	1877	7.25	2.5	8.5	2.75	8

*Distribution* :—Sind and the Punjab to Assam and thence to Burma. Common in the Terai. Introduced into Ceylon.

*Record Head* :—Length 23.25 in. Circumference 3.6 in. (*cf.* Lydekker, *Game Animals of India*, p. 242).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 549.

## CERVUS DUVAUCELI, Cuvier.

(THE SWAMP DEER OR BARASINGHA.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
1	?	Purchased	1858	15.5	4.5	25.5	5	17.75	7 x 7	17.75
2	?	Ditto	1858	?	?	22.25	4.5	16.75	5 x 5	17.75
3	Assam	H. Butcher	1879	?	?	20.75	4.75	18.5	7 x 6	13.75
4	Nerbudda	Raja R. Mullick	1850	10.75	3.75	4.25	2.75	...	2 x 2	3.75
5	?	Purchased	1858	14.5	4	13.5	4.75	19.25	6 x 5	23.5
6	?	Ditto	1858	?	?	15.75	3.5	12.5	5 x 6	10.75
7	Upper Bengal	T. Hardwicke	1822	?	4.75	28.5	5.25	20.5	7 x 6	14.25
8	Shillong, Assam	Purchased	1879	?	?	30.25	5.3	20.6	4 x 4	22.5
9	?	No history	1858	?	4.5	32.5	5.25	32.25	6 x 6	28.5
10	?	Ditto	1858	?	?	24	6.25	23.25	8 x 7	19
11	?	Ditto	1858	?	?	27.5	5.25	23.75	7 x 7	22.5
12	?	Ditto	1858	?	...	27.3	5.8	26.5	10 x 8	22.25
13	Assam	R. W. G. Frith	1842	?	4.75	27.25	5.25	22.75	7 x 7	20.5
14	?	No history	1858	?	?	27.25	5.25	28.5	10 x 10	21.4
15	Tezpur, Assam	H. Butcher	1879	...	?	30.25	5.5	24.5	6 x 7	18.75
16	Lakhimpur, Assam...	Ditto	1879	...	...	27.75	4.8	27.25	7 x 7	20.75
17	Calcutta	Zool. Gardens	1877	15.25	3.75	20.5	4	17	4 x 4	25.25
18	.....	No history	...	...	...	27.25	5.25	...	6	Single horn only.
19	.....	Ditto	...	...	...	24	4.75	...	5	Ditto.
20	...	Ditto	...	...	...	18	4.75	...	5	Ditto.
21	.....	Ditto	...	...	...	21.25	4.75	...	5 x 5	...



# **CERVUS DUVAUCELI, Cuvier—continued.**

(THE SWAMP DEER OR BARASINGHA)—continued.

No.	Locality	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
22	Sirgoojah (Chota Nagpur).	J. Cockburn	1886	...	...	35.5	5	...	6 × 6	...
23	.....	Zool. Gardens	1883	...	...	16.75	4.25	...	4 × 4	...

*Distribution*:—The base of the Himalayas from Kyarda Doon to Bhutan; Assam, along the Brahmaputra valley to the Sunderbunds. Occurs also in the Central Provinces from Mandhla to Midnapore.

*Record Head*:—Length 41 in. Circumference 5.5 in. (*cf.* Rowland Ward, *Horn Measurements*, p. 17).

*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 539.



9

15

*Cervus duvauceli*,  $\frac{1}{10}$ th scale.

# **CERVUS SCHOMBURGKI, Blyth.**

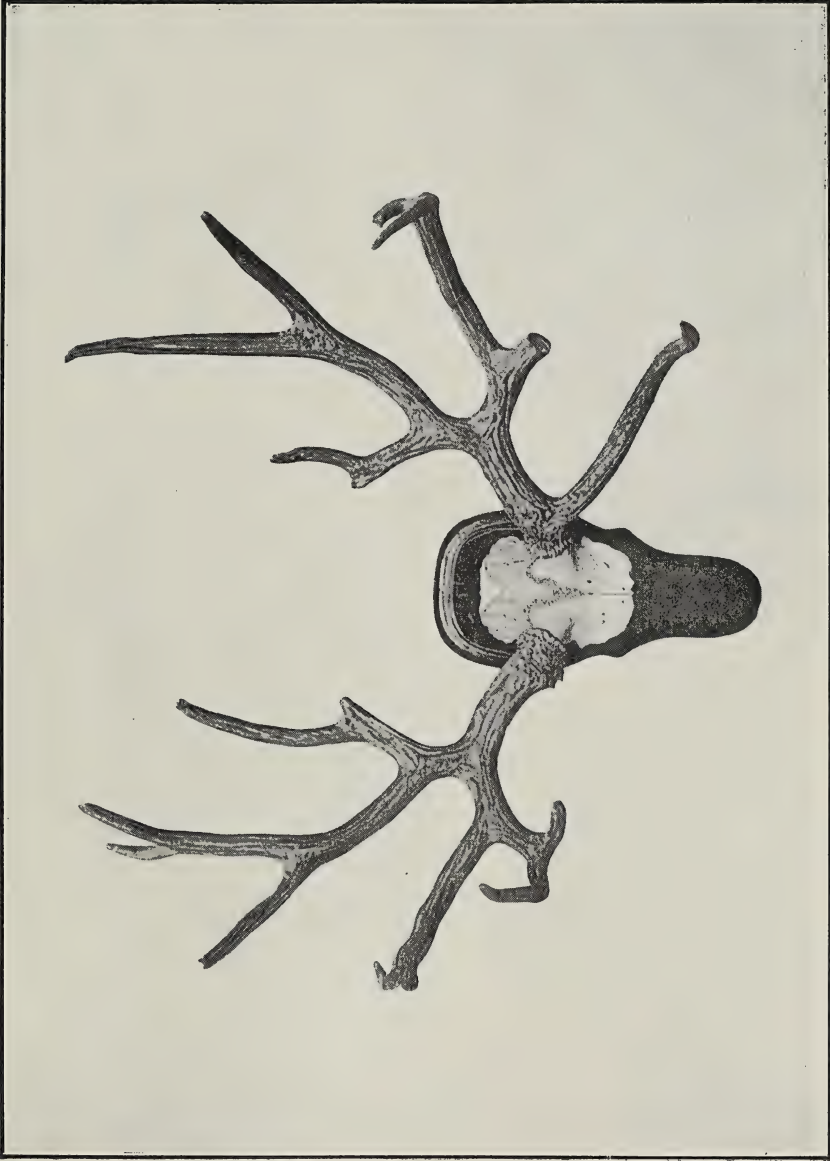
(SCHOMBURGK'S DEER.)

No.	Locality.	Donor.	Year.	Length of horn.	Circumference.	Widest inside.	Points.	Tip to tip.
1	Sanda Valley, Yunnan ...	J. Anderson	1878	30·25*	5·25	28·75	10 × 8	16·25

*Distribution*:—North Siam and Yunnan.  
*Cf. Lydekker, Deer of all Lands*, p. 194.

\* Record.





*Cervus schomburgki*, 14th scale.

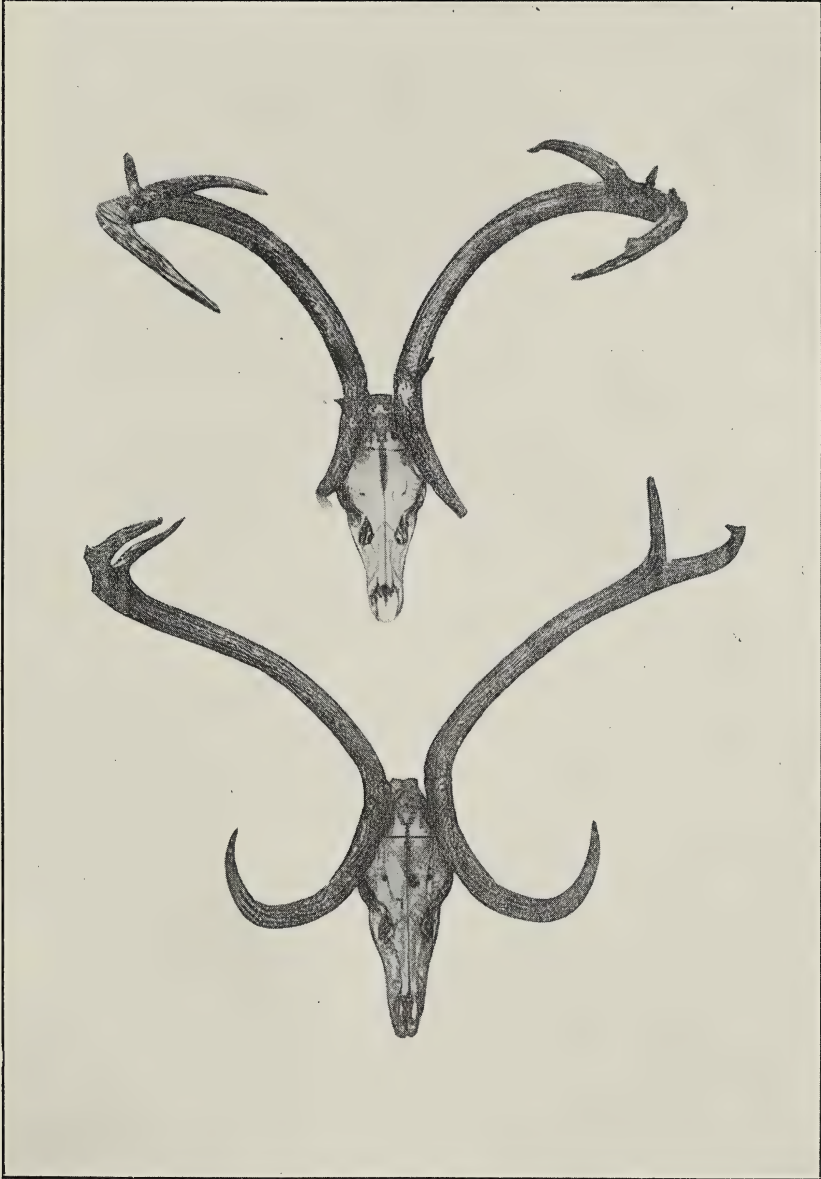
## CERVUS ELDI, Beavan.

(THE THAMINE.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Points.	Tip to tip.
1	Sitang R., Tenas- serim.	Maj. Berduore ...	1856	13.4	3.75	33.75	5.5	8 x 9	14
2	Manipur	Col. Guthrie	1861	?	?	22.25	3.75	2 x 2	17.25
3	Pegu ...	Sir A. Phayre	1847	12.5	3.75	19.75	4.75	5 x 5	22.75
4	Manipur	J. McClelland	1844	?	3.5	26.8	4.5	5 x 5	16.5
5	Martaban, Tenasserim	R. C. Beavan	1865	?	?	17.25	3.25	4 x 4	15.75
6	Penang	H. Lewis	1846	?	?	22.75	4.5	4 x 4	18.5
7	Manipur	J. McClelland	1844	11.9	3.75	33.75	4.75	5 x 4	26.75
8	Ditto	Purchased	1861	?	?	21.8	4	5 x 5	15.9
9	"Rangoon Bazaar"	Dr. Pritchard	1861	?	3.5	13.25	2.75	4 x 3	10
10	Pegu ...	Sir A. Phayre	1847	?	?	28.75	5.3	5 x 6	26.75
11	Manipur	J. McClelland	1844	12.25	3.75	32.25	4.25	7 x 6	27.25
12	Pegu ...	Sir A. Phayre	1847	12.4	3.75	31.9	5.25	5 x 4	20.25
13	Manipur	Purchased	1861	11.75	4.1	30.4	5.5	6 x 7	27.5
14	Pegu ...	Sir A. Phayre	1847	?	?	24.75	4.5	4 x 5	22.4

*Distribution*:—Manipur, southwards through Burma to the Malay Peninsula. Also found in Cambodia and Hainan.

*Record Head*:—Length 42 in. Circumference 5 in. (*cf.* Lydekker, *Game Animals of India*, etc., p. 255).  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 541.



*Cervus eldi*,  $\frac{1}{3}$ th scale.



## CERVULUS MUNTJAC, De Blainville.

(THE BARKING DEER.)

No.	Locality.	Year.	Date.	Basal length of skull.	Breadth of skull.	Length of horn.	Circumfer- ence.	Tip to tip.
1	No history	?	?	7.5	2.25	3.25	1.75	3.5
2	Dibrugarh, Assam	Purchased	1879	7.75	2.75	5.25	2.25	4.3
3	...	A. Mason	1872	?	?	8.25*	3.25	2.5
4	Arakan	Sir A. Phayre	1896	?	?	2.5	1.5	3.25
5	Ditto	Ditto	1896	?	?	3.25	1.8	3.5
6	Nepal	B. H. Hodgson	1844	7	2.5	5	2.25	2.75
7	No history	?	?	8	2.3	...	...	...
8	Ditto	?	?	7	2.25	5.6	2.25	2.5
9	Shevaroy Hills, Madras...	Mrs. W. King	1888	8.25	2.25	2.5	1.75	3.25
10	Nepal	Raja R. Mullick	1852	7.8	2.25	5.25	2.25	2.75
11	No history	?	?	7.75	2.25	2.25	1.25	3.25

*Distribution* :—India, Nepal, Ceylon, Burma, the Malay Peninsula, Java, Banka, Borneo and Hainan.  
*Cf.* Blanford, *Fauna of British India*, Mammalia, p. 532.

\* Record.

2



8



3



*Cervulus muntjac*,  $\frac{1}{8}$ th scale.

CERVULUS FEÆ, Thomas and Doria,

(FEA'S RIB-FACED DEER.)

No specimen in the Museum.  
Cf. Thomas and Doria, *Ann. Mus. Civ. Gen.*, 2, 2a, vii, p. 92.

CERVULUS REEVESI, Swinhoe.

(THE CHINESE MUNTJAC.)

No.	Locality.	Donor.	Year.	Basal length of skull.	Breadth of skull.	Length of horn,	Circumfer- ence.	Tip to tip.
1	Formosa	... R. Swinhoe	1860	6.25	2	2	1.25	2.25

*Distribution*:—S. China to Ningpo ; Formosa.  
Cf. Lydekker, *Deer of all Lands*, p. 208.





1

*Cervulus reevesi*, ♂rd scale.

## CAPREOLUS PYGARGUS, Gray.

(THE SIBERIAN ROE-DEER)

No.	Locality.	Donor.	Year.	Length of horn.	Circumfer- ence.	Tip to tip.	Points.
1	Kashgar	... 2nd Yarkand Mission	... 1878—91	12	4·75	2·75	3 × 3

*Distribution* :—From the Altai Range and the Mountains of Turkestan to Siberia; the Caspian province of Persia; in winter migrating to Manchuria and Corea.

*Record Head* :—Length 15 in. Circumference 4·75 in.

*Cf. Scientific Results Second Yarkand Mission*, 1878—91; and Lydekker, *Deer of all Lands*, p. 227.



1

*Capreolus pygargus*,  $\frac{3}{4}$ th scale.





# RECORDS

## OF THE

# INDIAN MUSEUM

### (A JOURNAL OF INDIAN ZOOLOGY)

Vol. I, 1907.

**Part I.**—Contributions to the Fauna of the Arabian Sea. Records of Hemiptera and Hymenoptera from the Himalayas. Further Notes on Indian Freshwater Entomostraca. The Fauna of Brackish Ponds at Port Canning, Lower Bengal, I—III. A Sporozoon from the Heart of a Cow. Miscellanea.

**Part II.**—Revision of the Oriental Stratiomyidae. Description of an Oligochaete Worm allied to *Chaetogaster*. The Fauna of Brackish Ponds at Port Canning, Lower Bengal, IV. Further Note on a Polyzoon from the Himalayas. Reports on a collection of Batrachia, Reptiles and Fish from Nepal and the Western Himalayas. The Fauna of Brackish Ponds at Port Canning, Lower Bengal, V. Notes on Oriental Diptera, I and II. Miscellanea.

**Part III.**—Report on the Marine Polyzoa in the collection of the Indian Museum. The Fauna of Brackish Ponds at Port Canning, Lower Bengal, VI. A third Note on Earwigs (Dermaptera) in the Indian Museum, with the description of a new species. Notes on Oriental Diptera, III. Description of a new Snake from Nepal. Notes on a collection of marketable Fish from Akyab, with a description of a new species of *Lactarius*. Description of two Freshwater Oligochaete Worms from the Punjab. Notes on Phosphorescence in Marine Animals. Notes on the Rats of Dacca, Eastern Bengal. Notes on Freshwater Sponges, I—V. Miscellanea.

**Part IV.**—*Nudiclaca monocanthi*, the type of a new genus of Hydroids parasitic on Fish. Preliminary descriptions of three new Nycteribiidae from India. Annotated Catalogue of Oriental Culicidae. Notes on Oriental Diptera. Notes on Freshwater Sponges, VI, VII. Description of a new Cyprinid Fish of the genus *Danio* from Upper Burma. Miscellanea.

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**Part II.**—Gardiens du Musée Indien. The Fauna of Brackish Ponds at Port Canning, Lower Bengal, IX. Description of a new species of *Danio* from Lower Burma. Rhynchota Malayana, I. *Cimex rotundatus*, Signoret. Notes on Freshwater Sponges, IX. Fruit Bats of the genus *Pteropus* inhabiting the Andaman and Nicobar Archipelagos. A new species of Sun Bird obtained near Darjiling. Three Indian Phylactolamata. On two new species of Eagle-Rays (Myliobatidae). Description of a new species of the genus *Sesarma*, Say, from the Andaman Islands. Descriptions of new species of Land, Marine, and Freshwater Shells from the Andaman Islands.

**Part III.**—The Fauna of Brackish Ponds at Port Canning, Lower Bengal, X, XI. On some Oriental Solifugae, with descriptions of new forms. The difference between the Takin (*Budorcas*) from the Mishmi Hills and that from Tibet, with notes on variation displayed by the former. On *Caridina nilotica* (Roux) and its varieties. Description of a new species of *Charaxes* from the Bhutan Frontier. First report on the collection of Culicidae and Corethridae in the Indian Museum, with descriptions of new genera and species. Miscellanea.

- Part IV.*—Report on a collection of Aquatic Animals made in Tibet by Capt. F. H. Stewart, I.M.S., in 1907, I. Notes on Aculeate Hymenoptera in the Indian Museum, I. Indian Psychodidæ. Description of a new species of Mouse from the Madura District, Madras. Some Cleridæ of the Indian Museum. The Fauna of Brackish Ponds at Port Canning, Lower Bengal, XII. Description of a new species of Saw-Fish captured off the Burma Coast. A new Sting Ray of the genus *Trygon* from the Bay of Bengal. New Microlepidoptera from India and Burma. Notes on some Chrysomelid Beetles in the collection of the Indian Museum. Six new Ciciudelinæ from the Oriental Region. Description of a new Slug from Tibet.
- Part V.*—Revision of the Oriental Leptidæ. Revised and annotated Catalogue of Oriental Bombylidæ, with descriptions of new species.
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